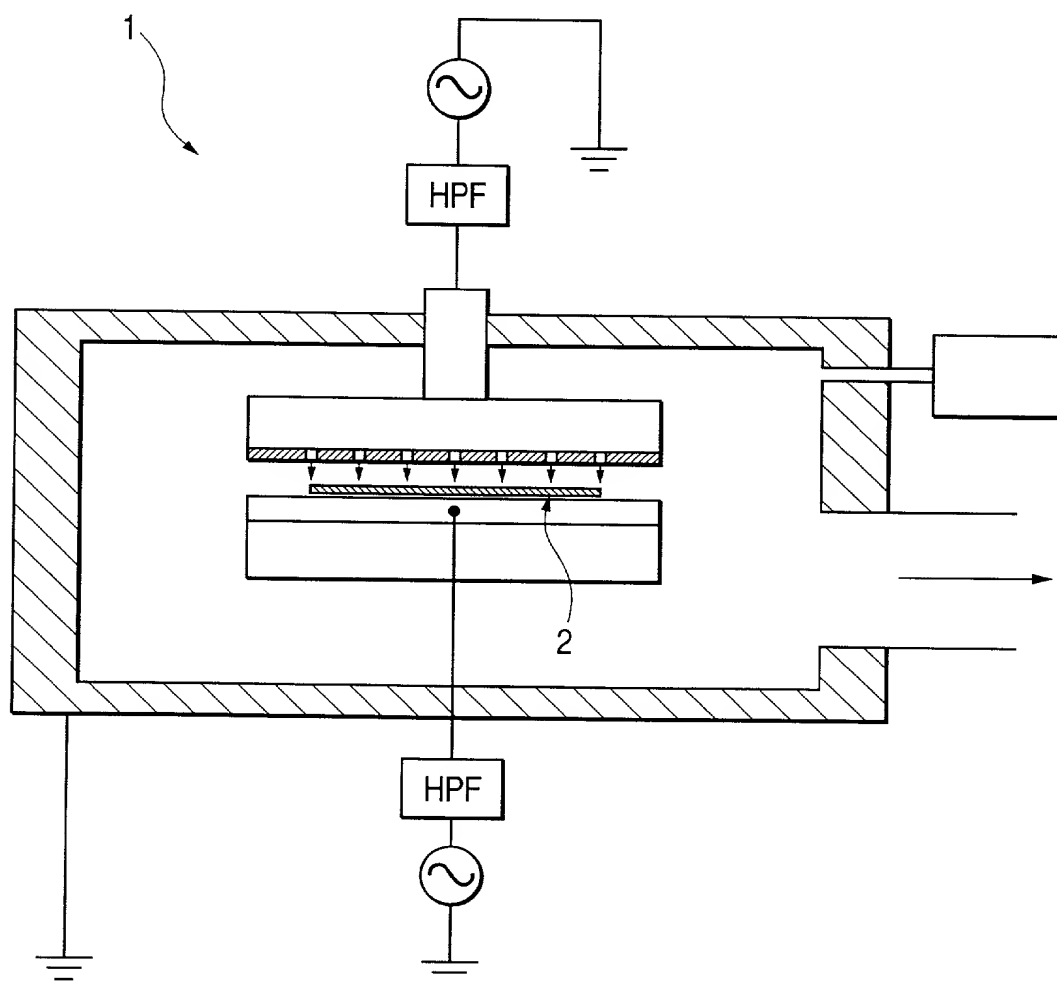


FIG. 1



*FIG. 2*

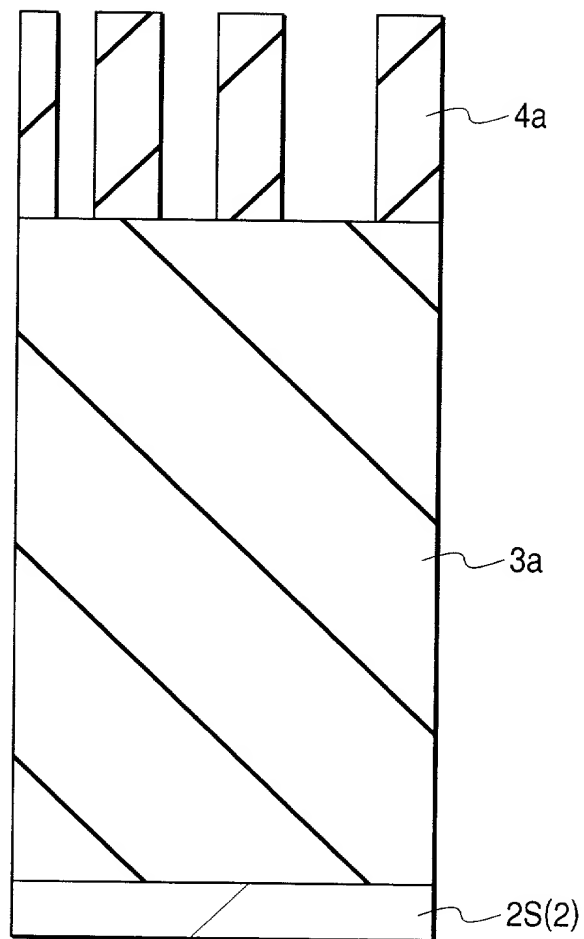


FIG. 3

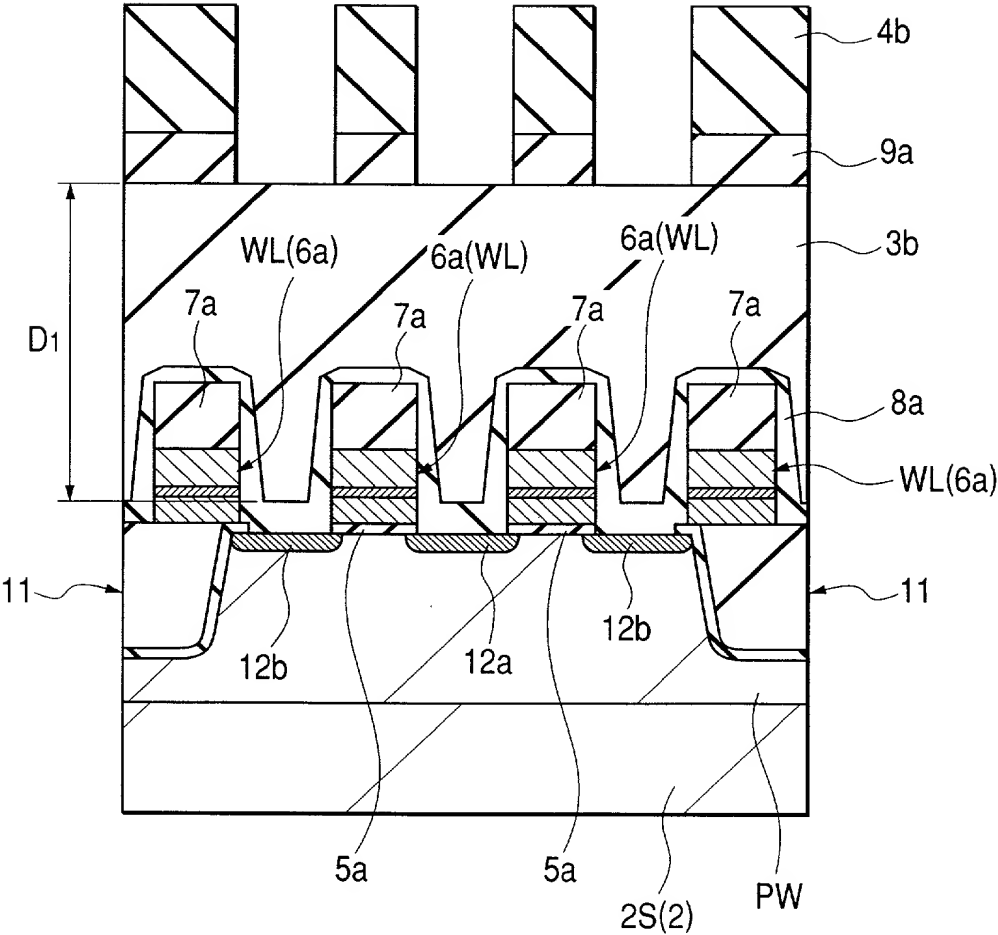


FIG. 4(a)

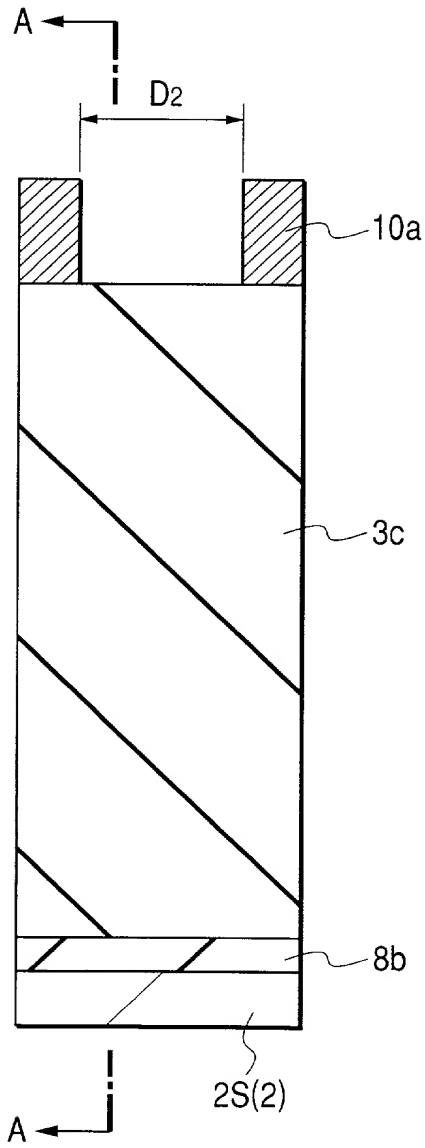


FIG. 4(b)

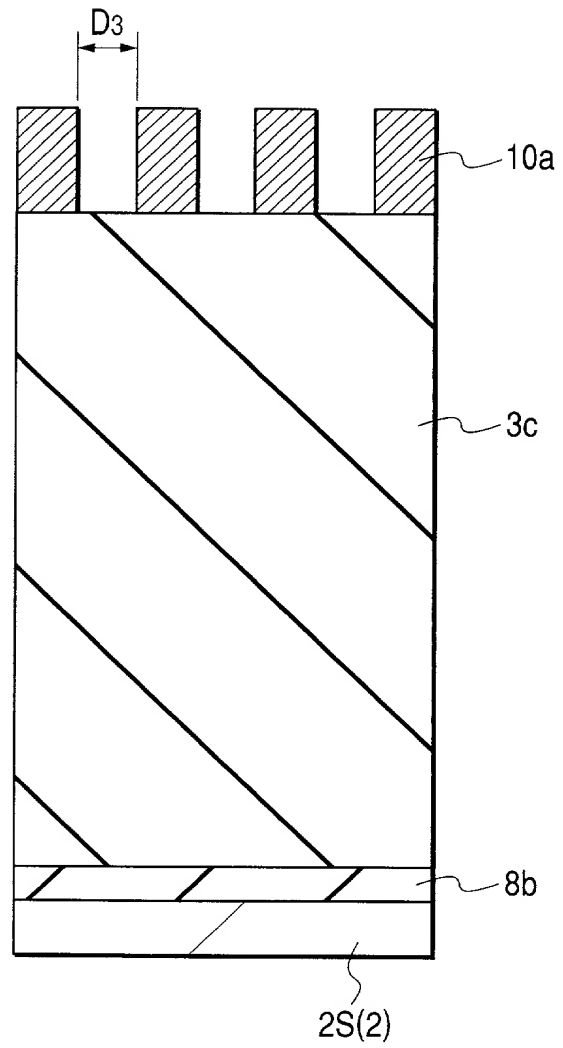


FIG. 5

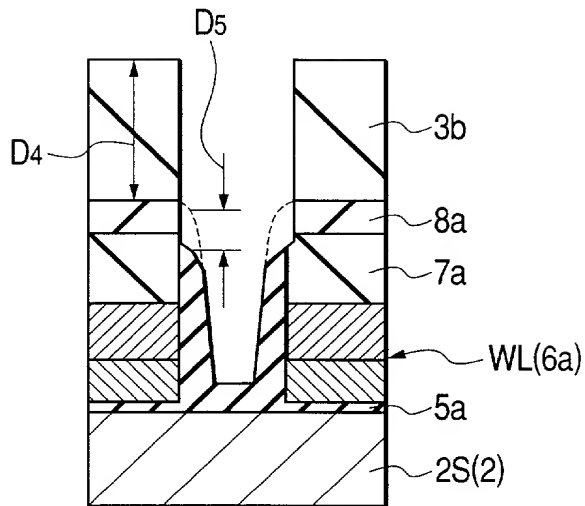


FIG. 6

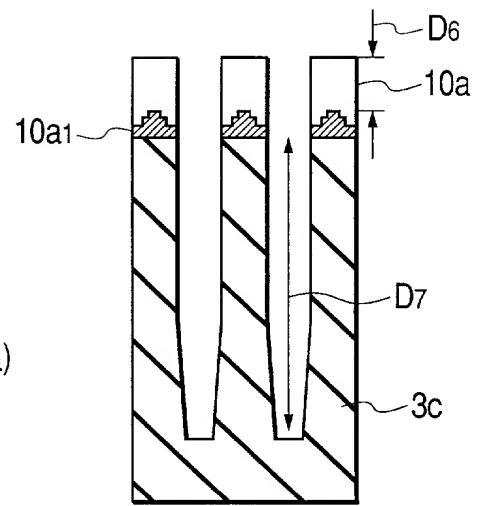
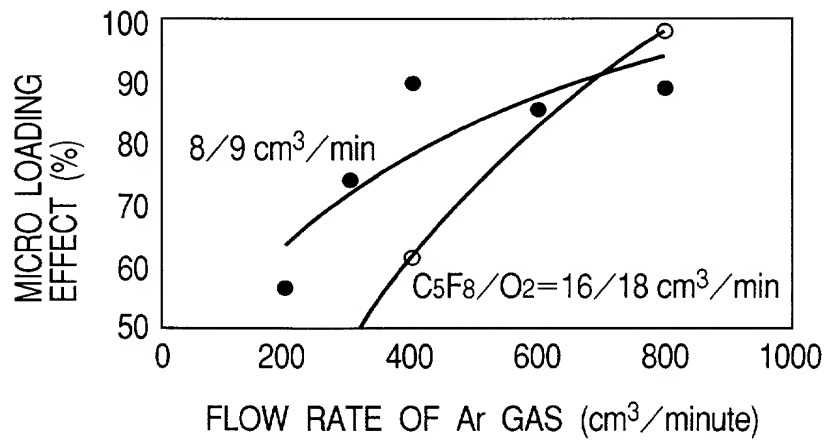


FIG. 7



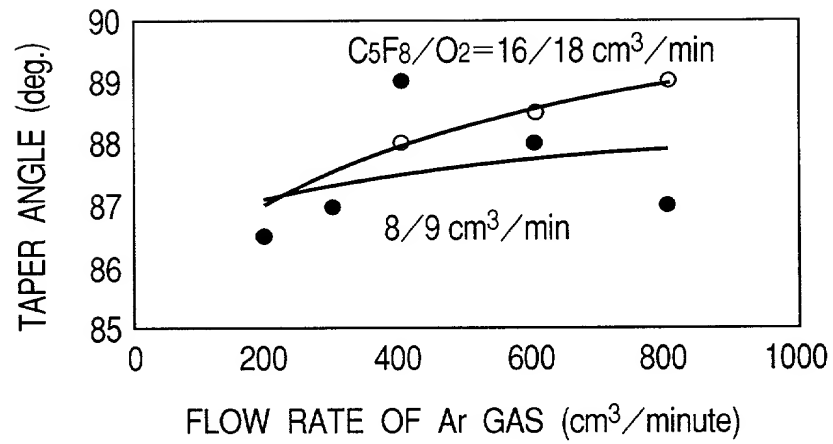
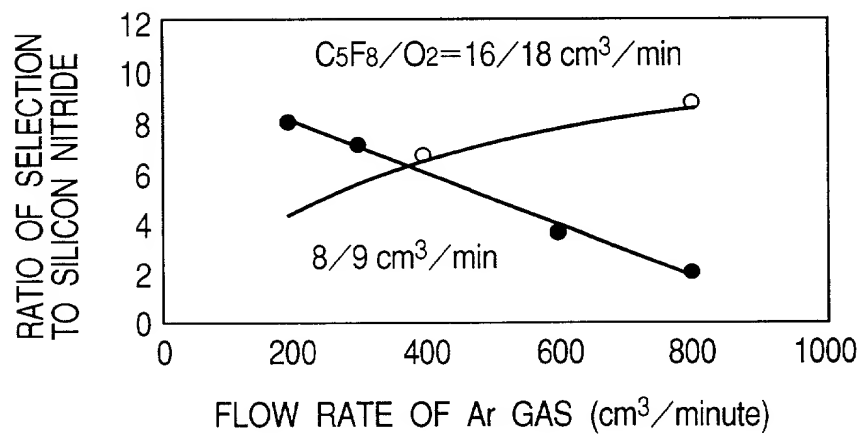
*FIG. 8(a)**FIG. 8(b)*

FIG. 9(a)

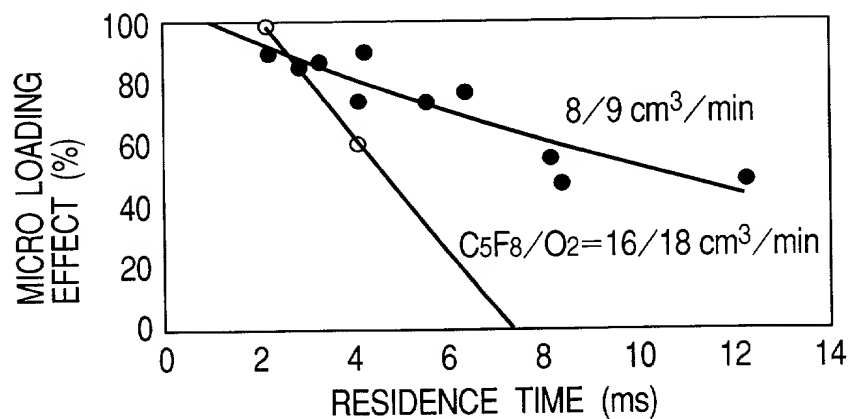


FIG. 9(b)

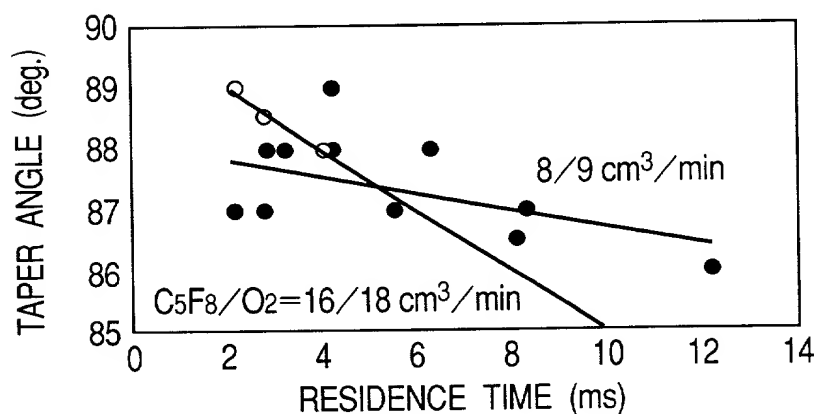
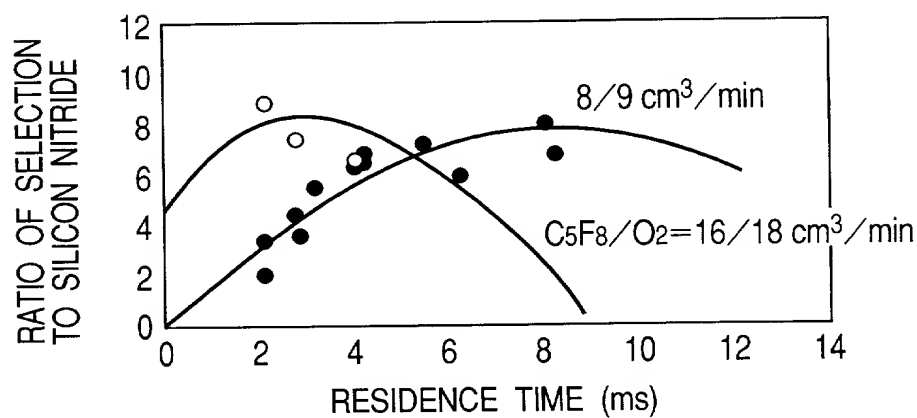
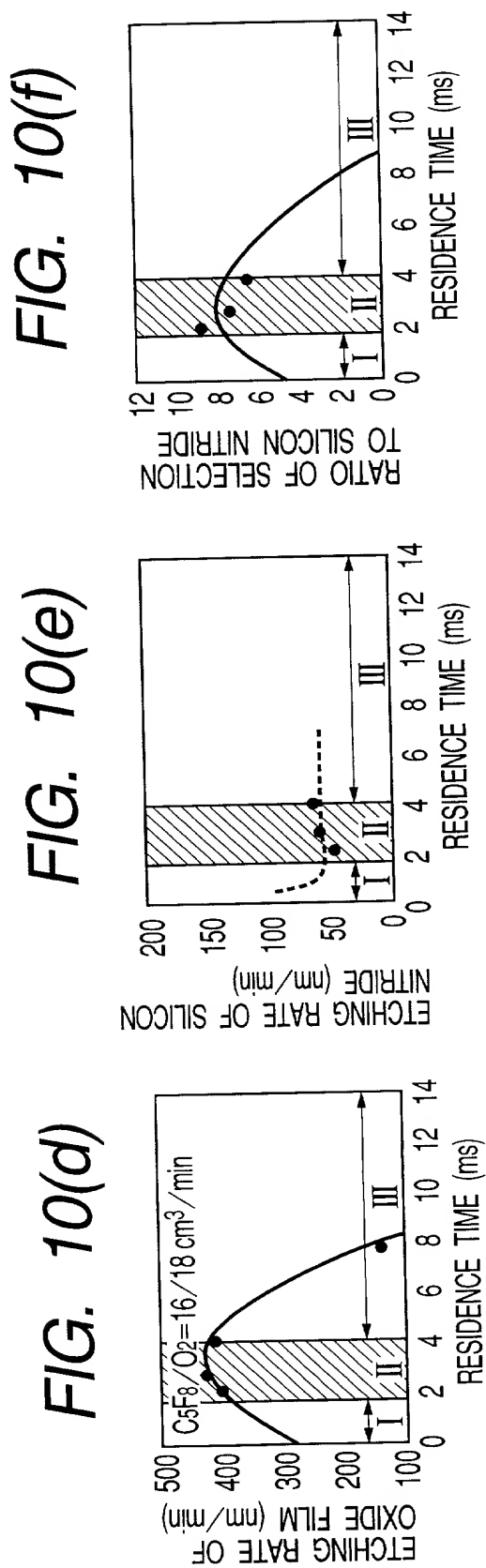
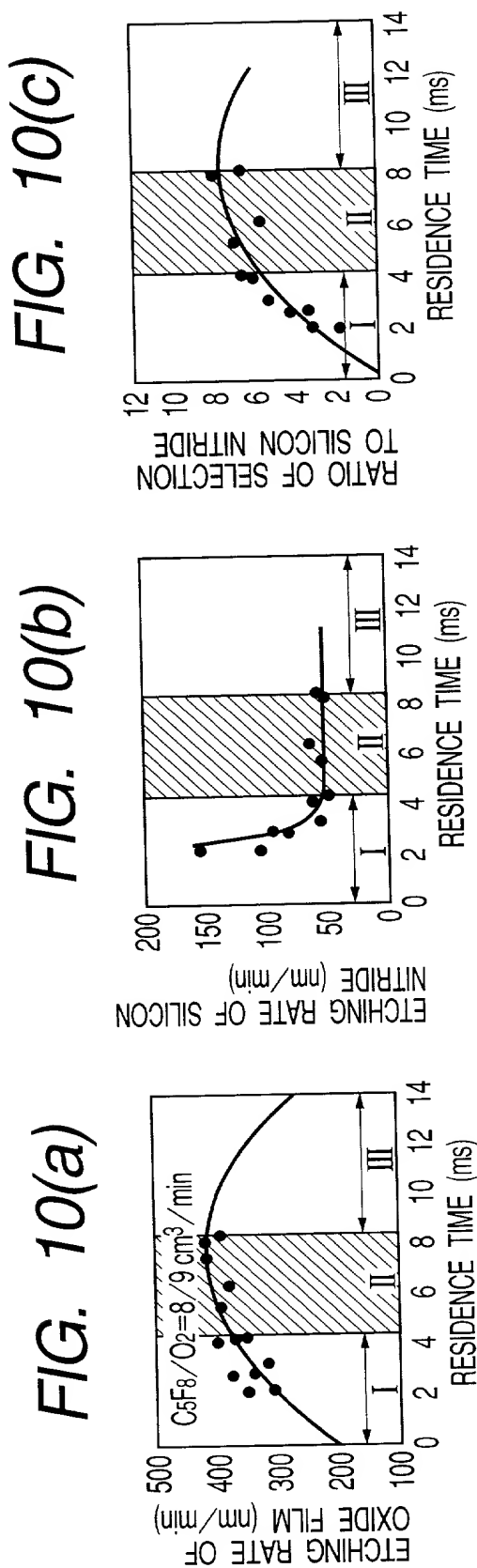
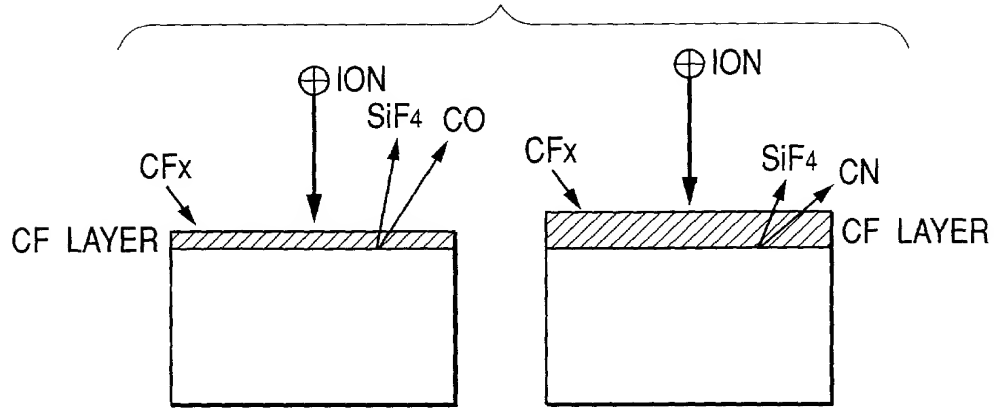
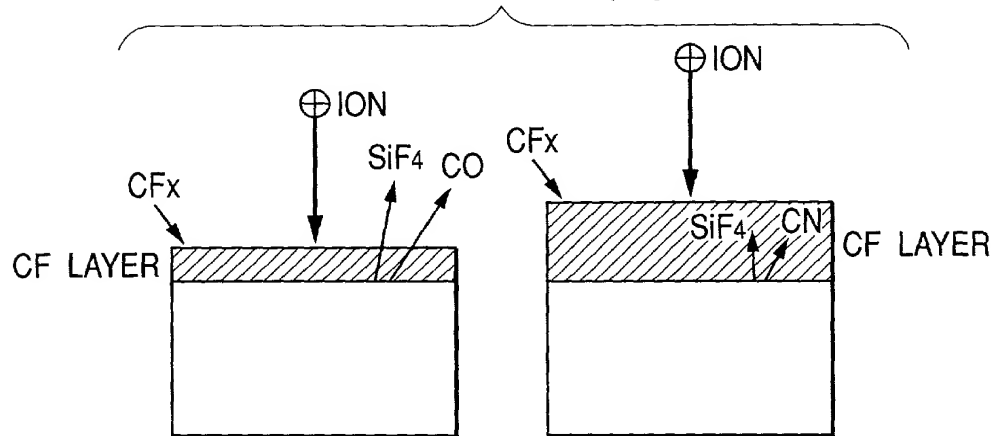
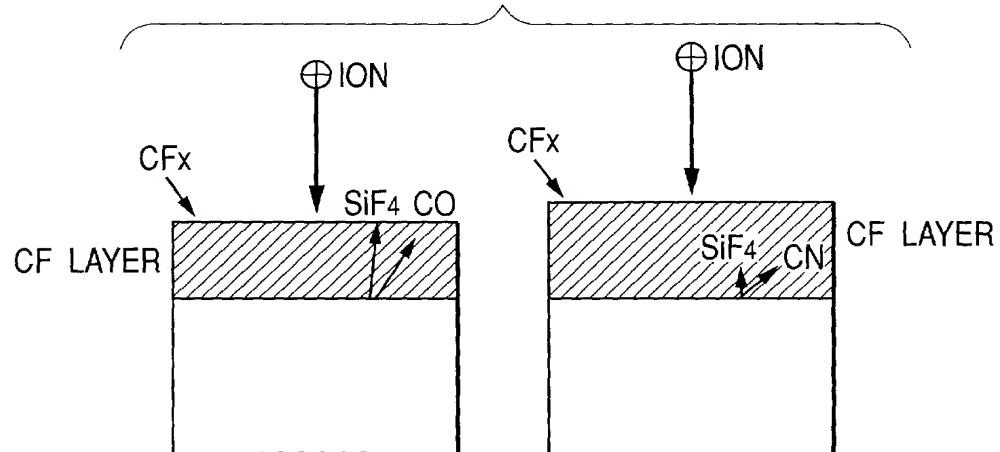


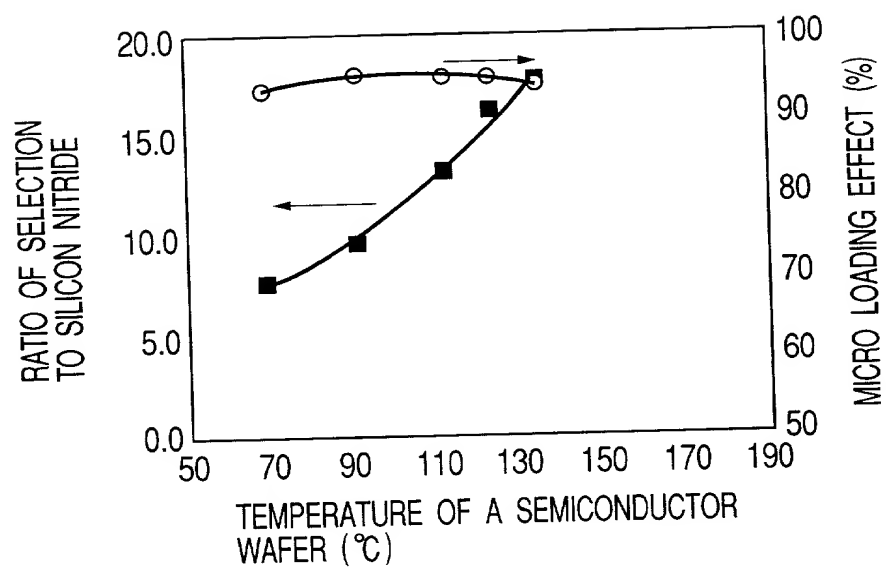
FIG. 9(c)







**FIG. 11(a)****FIG. 11(b)****FIG. 11(c)**

*FIG. 12*

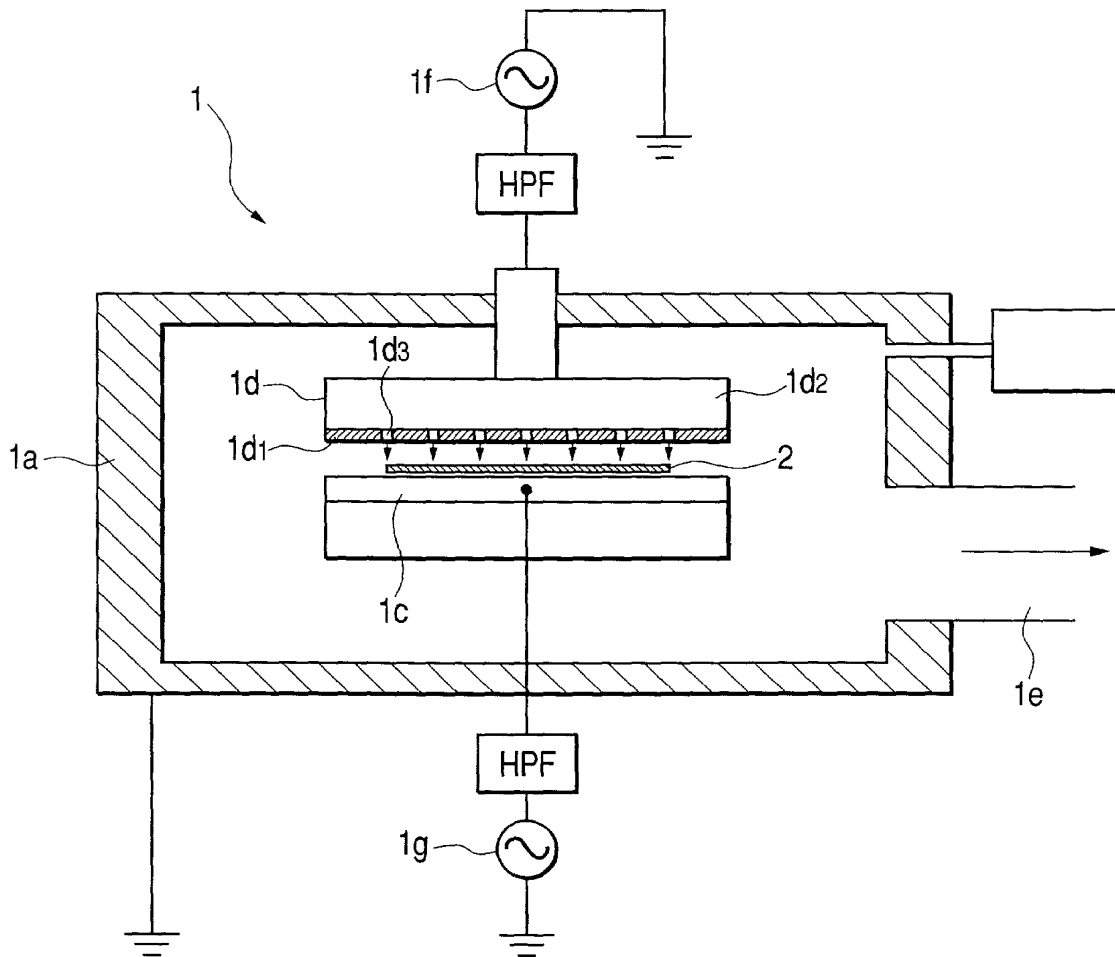
*FIG. 13*

PARAMETERS			
PRESSURE	[Pa]		2.66
RF POWER	UPPER PORTION	[W]	800
	LOWER PORTION	[W]	700
FLOW RATE OF C <sub>5</sub> F <sub>8</sub>	[cm <sup>3</sup> /minute]		16
FLOW RATE OF O <sub>2</sub>	[cm <sup>3</sup> /minute]		18
FLOW RATE OF Ar	[cm <sup>3</sup> /minute]		800
ELECTRODE TEMPERATURE			
	UPPER PORTION	(°C)	60
	LOWER PORTION	(°C)	20
TEMPERATURE OF WALL SURFACE	[°C]		50
ELECTRODE GAP	[mm]		21

*FIG. 14*

PARAMETERS			
PRESSURE	[Pa]		2.66
RF POWER	UPPER PORTION	[W]	1800
	LOWER PORTION	[W]	1500
FLOW RATE OF C <sub>5</sub> F <sub>8</sub>	[cm <sup>3</sup> /minute]		24
FLOW RATE OF O <sub>2</sub>	[cm <sup>3</sup> /minute]		28
FLOW RATE OF Ar	[cm <sup>3</sup> /minute]		700
ELECTRODE TEMPERATURE			
	UPPER PORTION	(°C)	60
	LOWER PORTION	(°C)	20
TEMPERATURE OF WALL SURFACE	[°C]		50
ELECTRODE GAP	[mm]		19

**FIG. 15**



**FIG. 16**

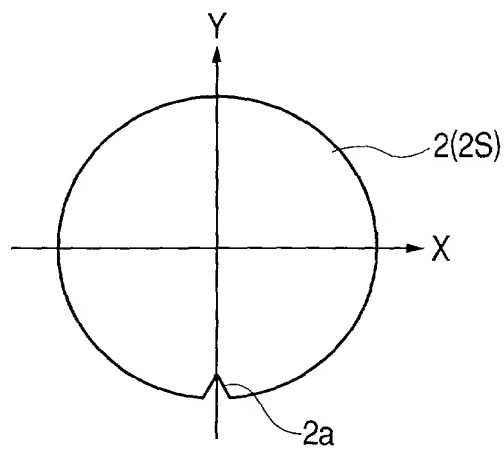


FIG. 17

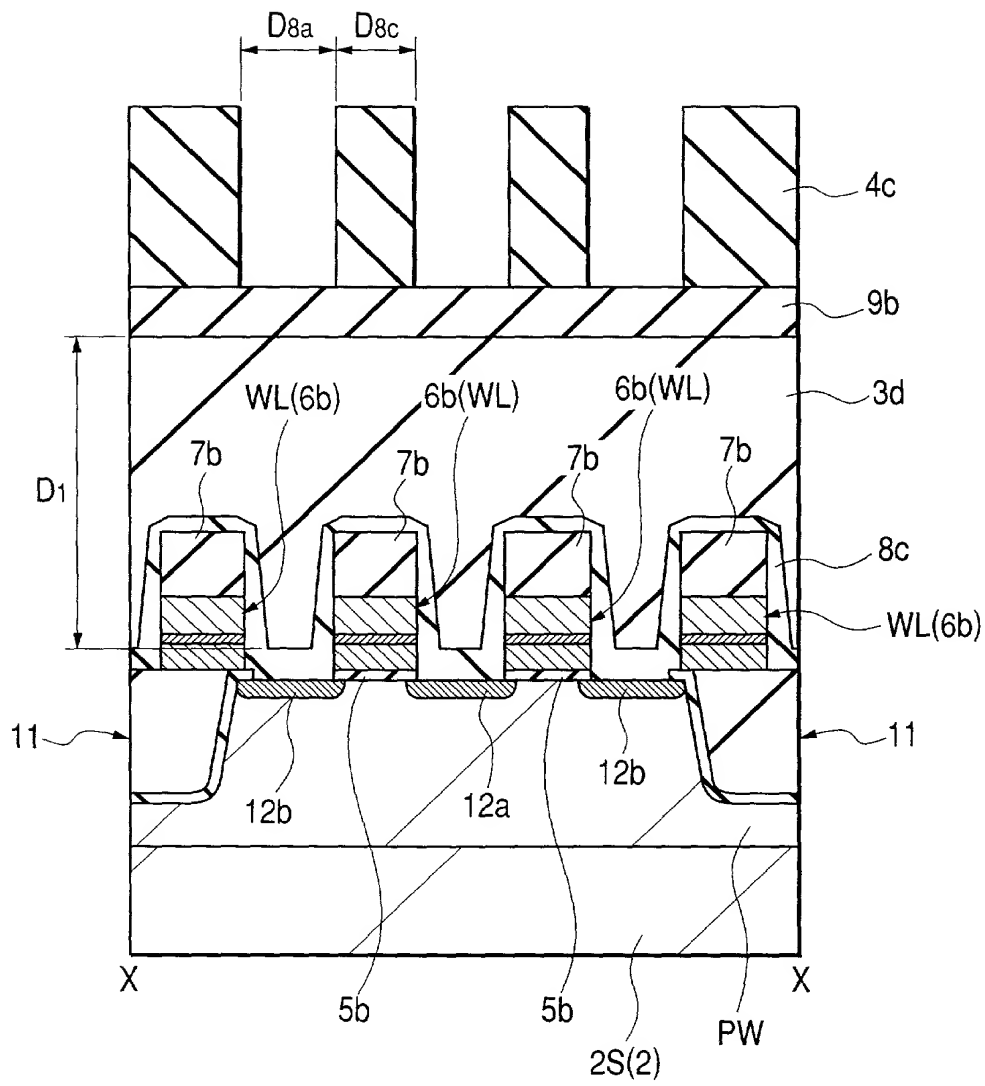


FIG. 18

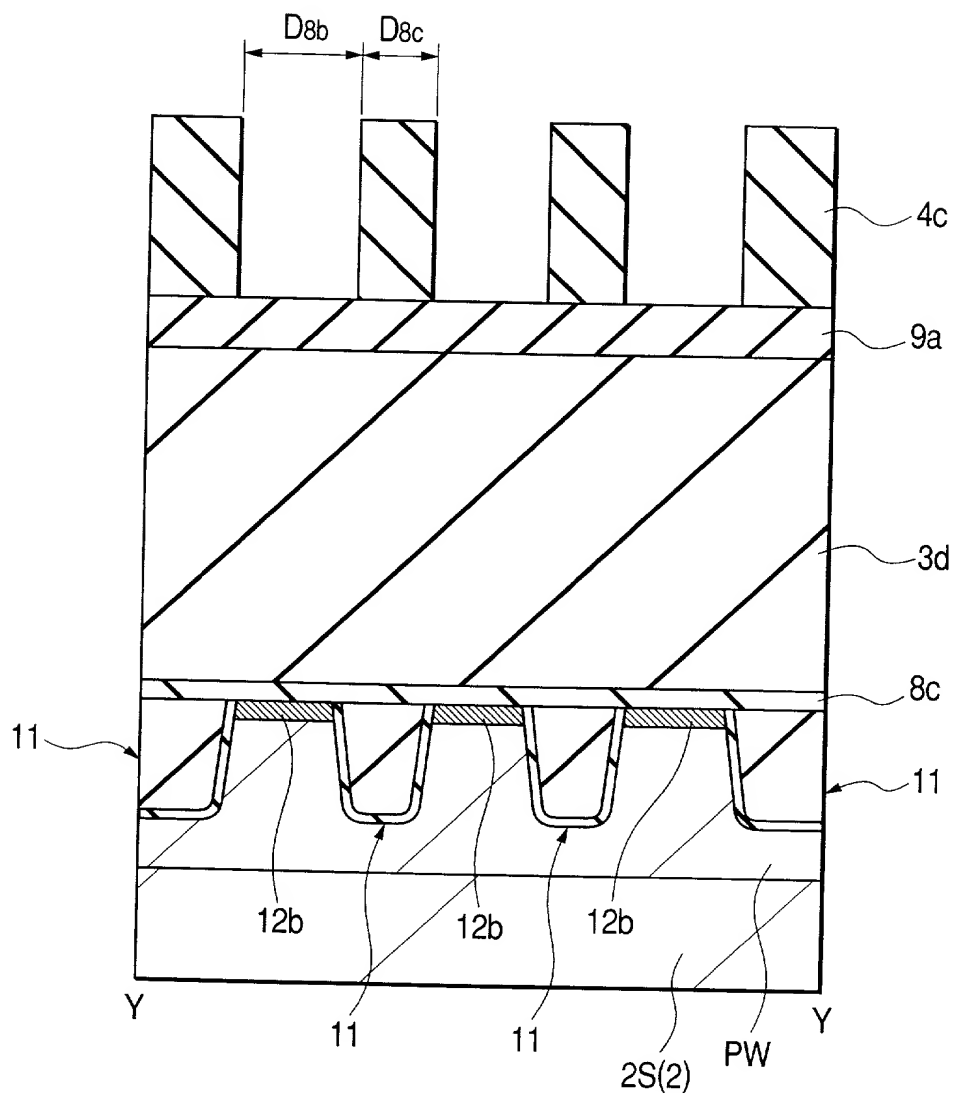


FIG. 19

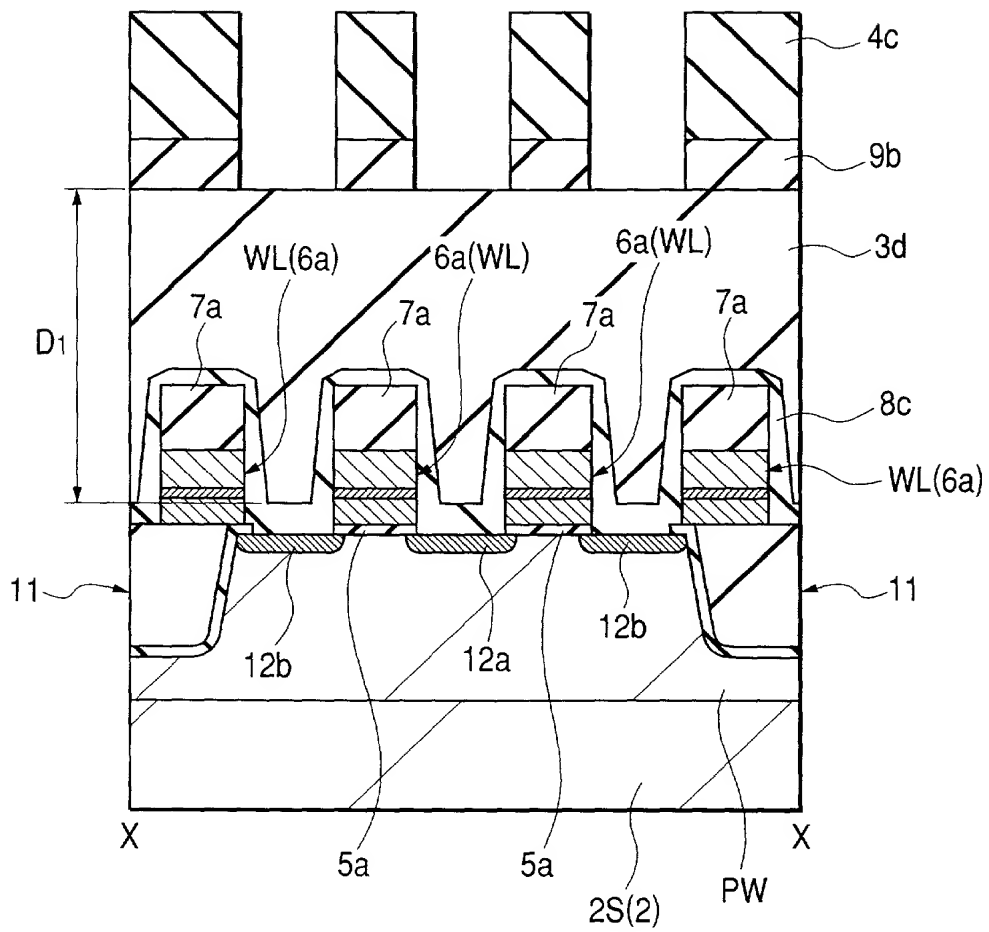




FIG. 20

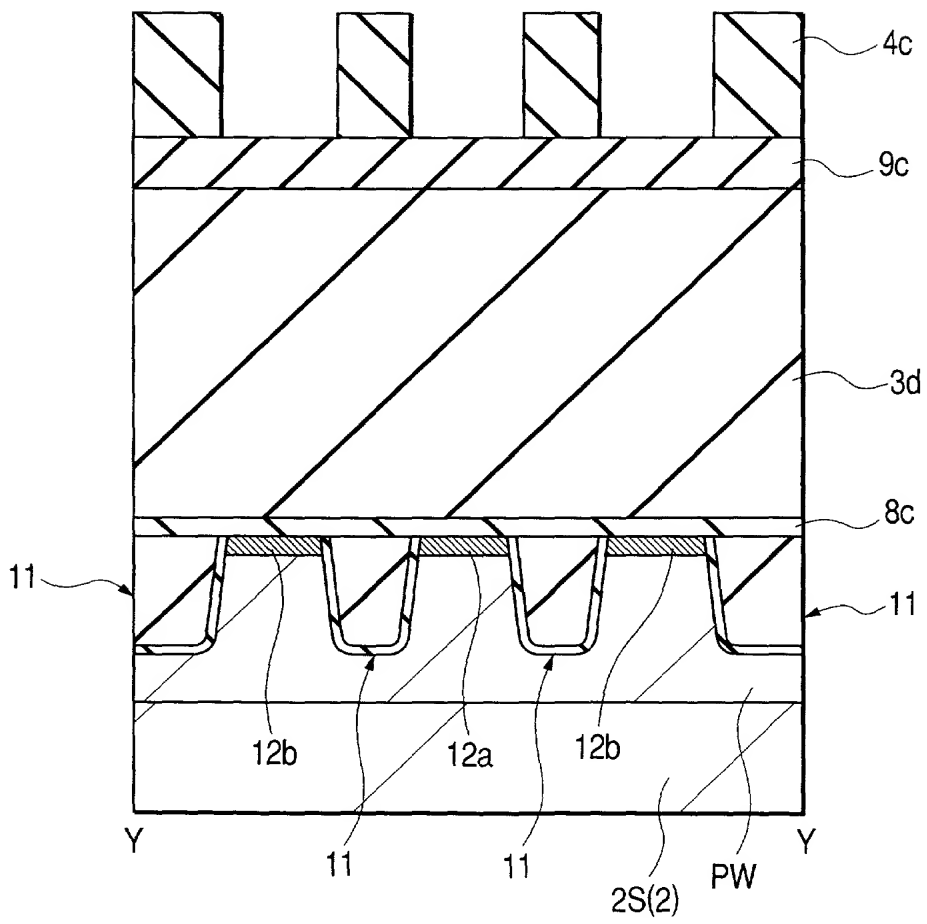
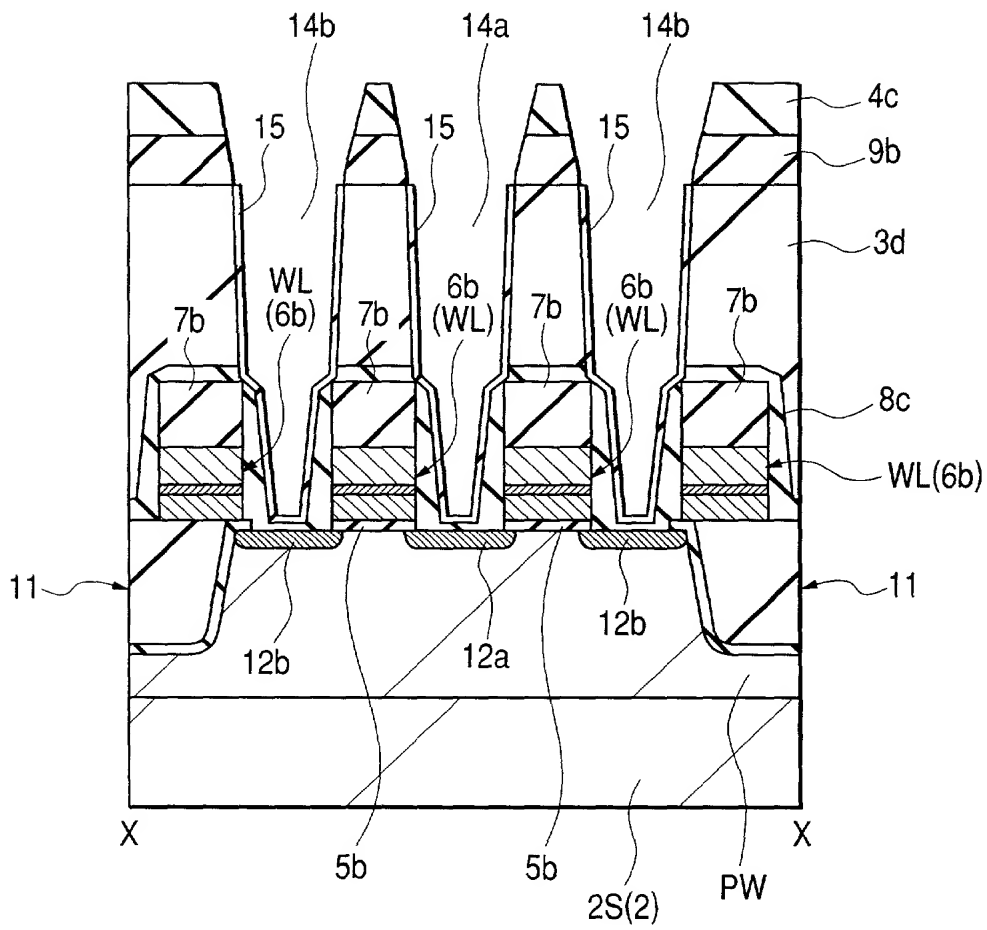


FIG. 21



This cross-sectional view shows the device structure along the Y-Y line. It features a substrate 12b with a patterned layer 11 on top. A thin layer 8c is positioned above the patterned layer 11. On top of layer 8c, there are four vertical structures 15, each consisting of a core 14b and a top layer 9b. The structures 15 are separated by a material 3d. The top surface of the structures 15 is labeled 4c. The Y-Y line is indicated at the bottom of the diagram.

FIG. 23

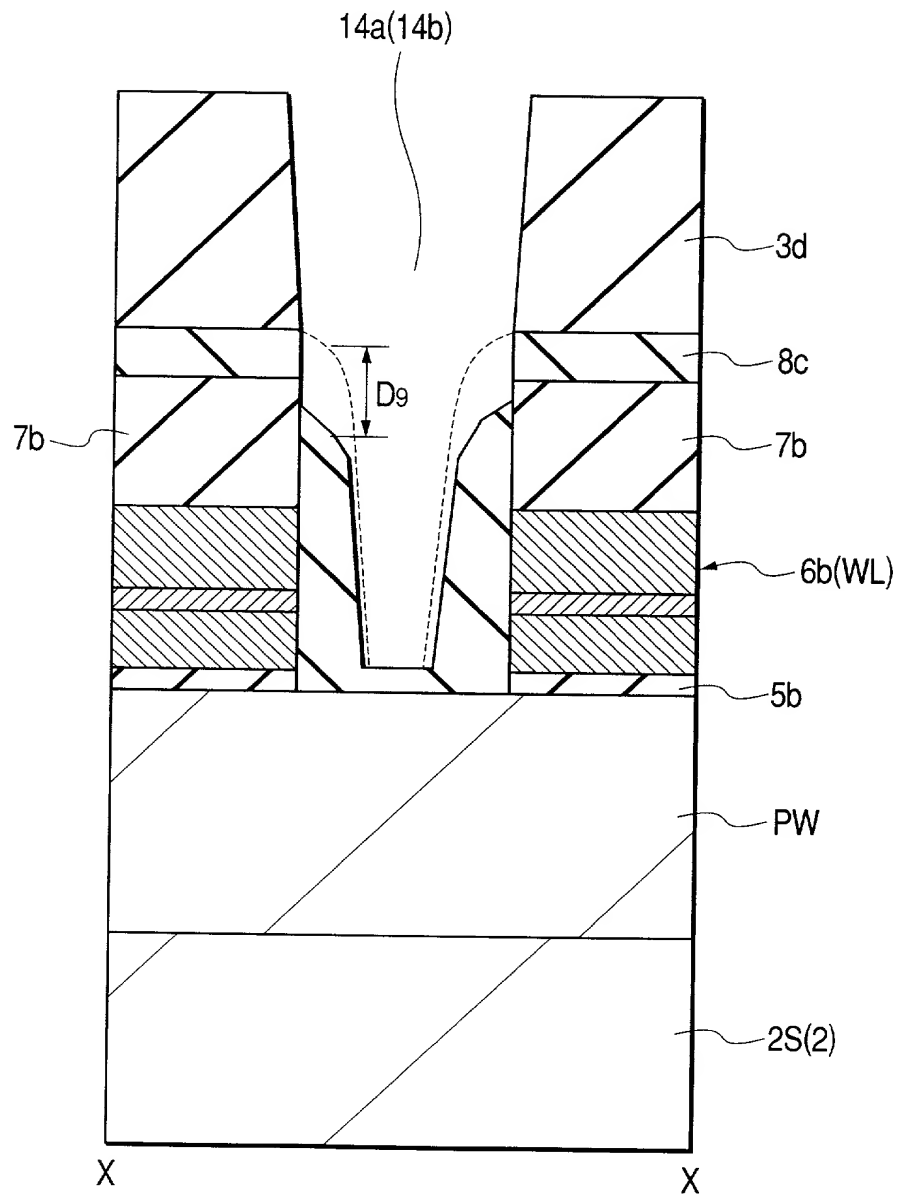


FIG. 24

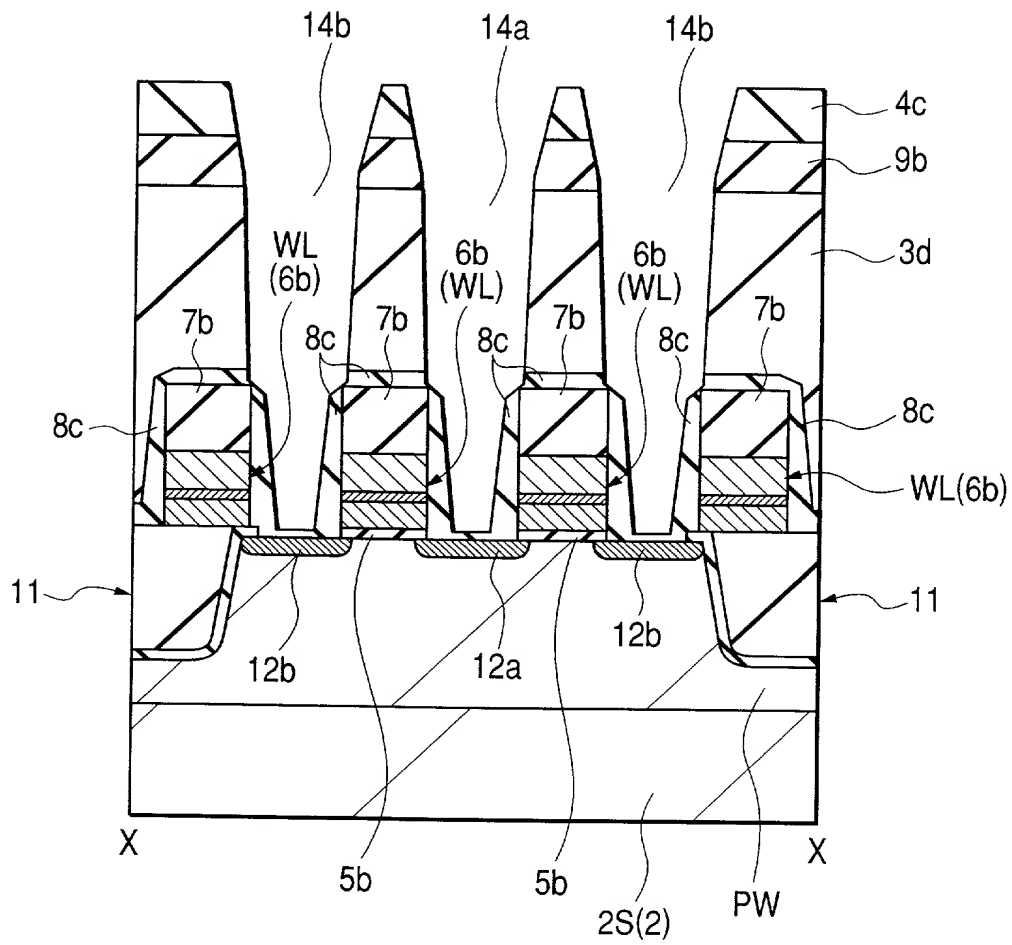


FIG. 25

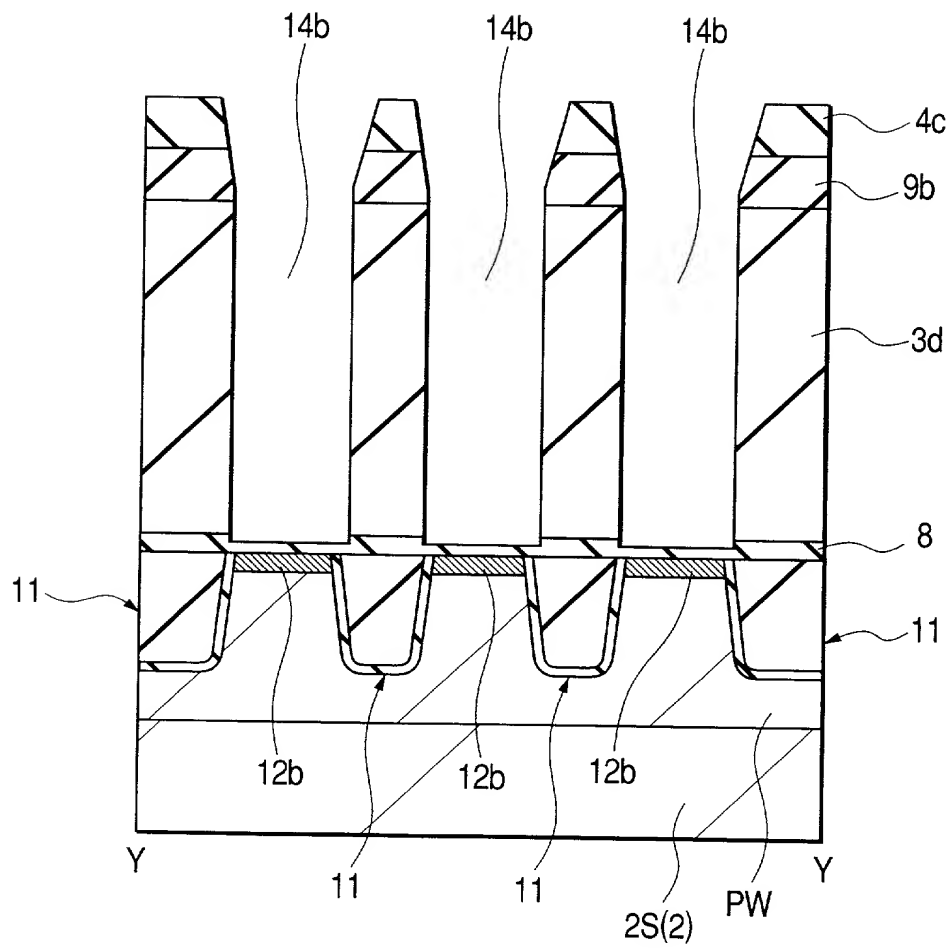


Figure 1 consists of 12 sub-graphs labeled (a) through (l), each showing the effect of a different treatment on the growth of *E. coli* O157:H7 in ground beef. The y-axis for all graphs is  $\log_{10}$  CFU/g, ranging from 0 to 10. The x-axis is time in hours, ranging from 0 to 120. The graphs show various growth curves, with some treatments showing a decrease in CFU over time, indicating inhibition of growth.

- (a) Control: Shows a steady increase in CFU from approximately 1 to 10 over 120 hours.
- (b) 100 µg/ml Nalidixic acid: Shows a decrease in CFU from approximately 1 to 0 over 120 hours.
- (c) 100 µg/ml Chloramphenicol: Shows a decrease in CFU from approximately 1 to 0 over 120 hours.
- (d) 100 µg/ml Tetracycline: Shows a decrease in CFU from approximately 1 to 0 over 120 hours.
- (e) 100 µg/ml Streptomycin: Shows a decrease in CFU from approximately 1 to 0 over 120 hours.
- (f) 100 µg/ml Kanamycin: Shows a decrease in CFU from approximately 1 to 0 over 120 hours.
- (g) 100 µg/ml Gentamicin: Shows a decrease in CFU from approximately 1 to 0 over 120 hours.
- (h) 100 µg/ml Neomycin: Shows a decrease in CFU from approximately 1 to 0 over 120 hours.
- (i) 100 µg/ml Polymyxin B: Shows a decrease in CFU from approximately 1 to 0 over 120 hours.
- (j) 100 µg/ml Colistin: Shows a decrease in CFU from approximately 1 to 0 over 120 hours.
- (k) 100 µg/ml Bacitracin: Shows a decrease in CFU from approximately 1 to 0 over 120 hours.
- (l) 100 µg/ml Vancomycin: Shows a decrease in CFU from approximately 1 to 0 over 120 hours.



FIG. 27

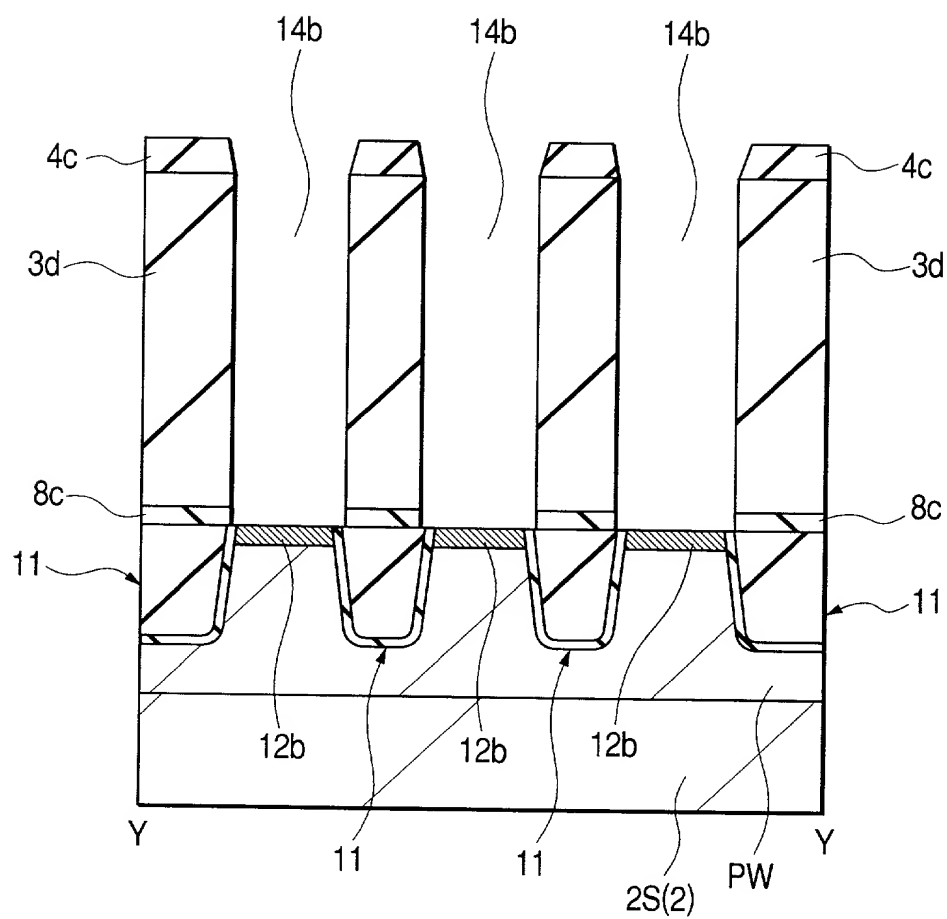




FIG. 28

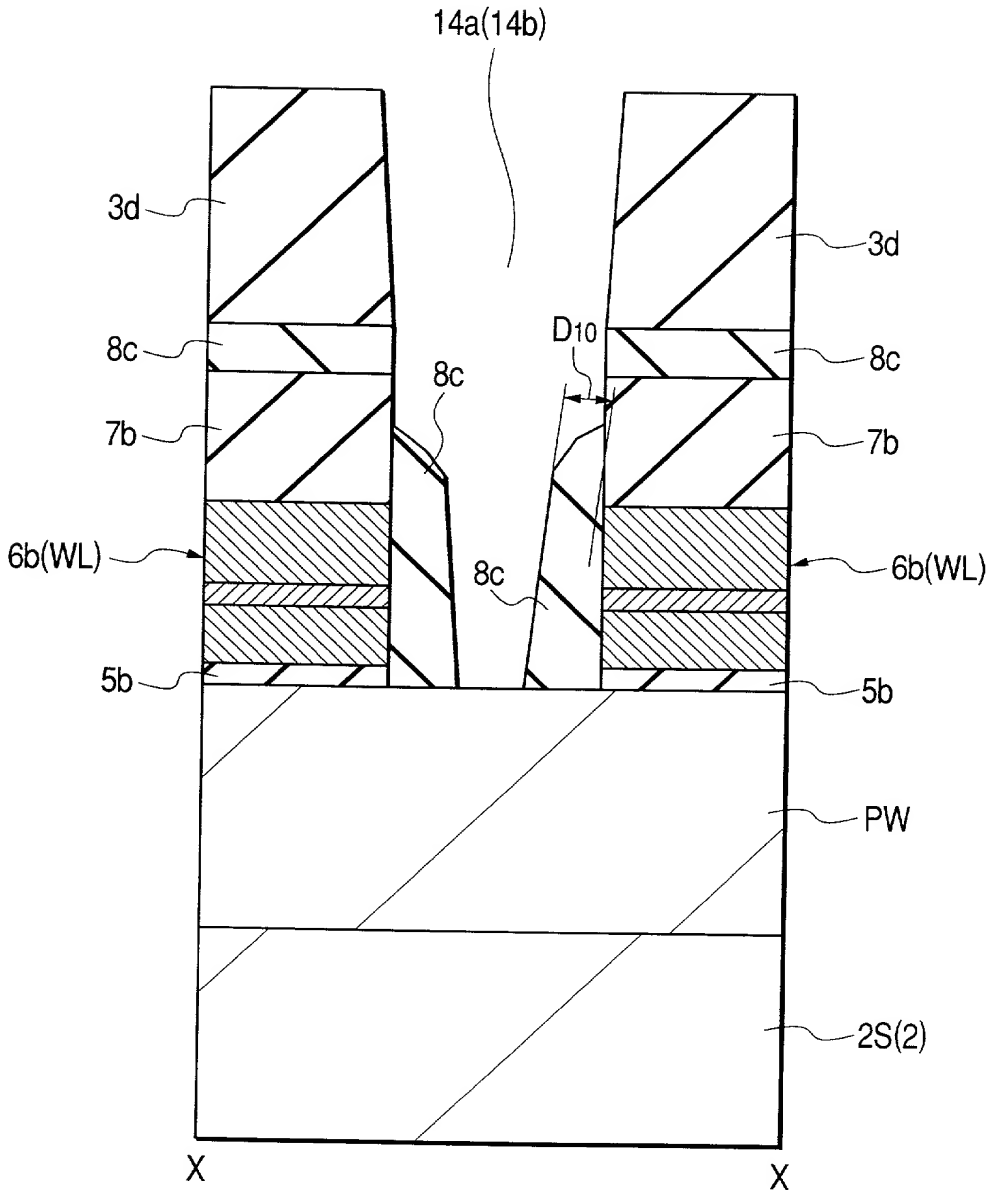
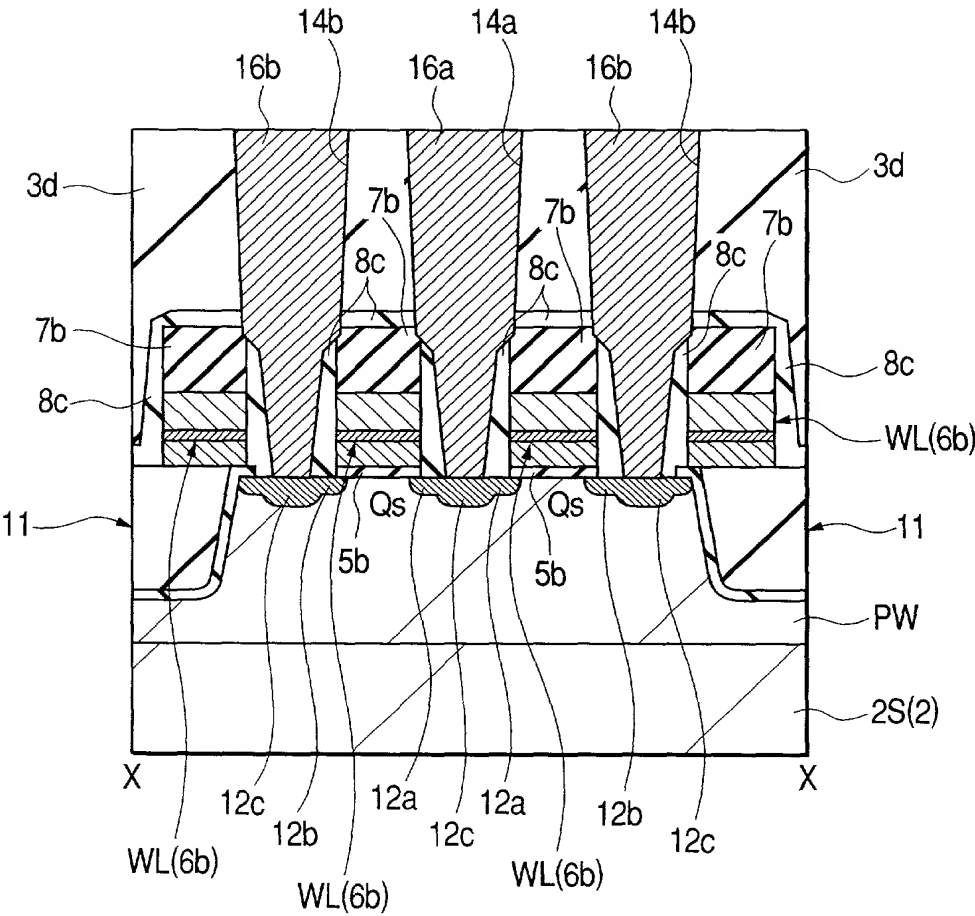


FIG. 29



**FIG. 30**

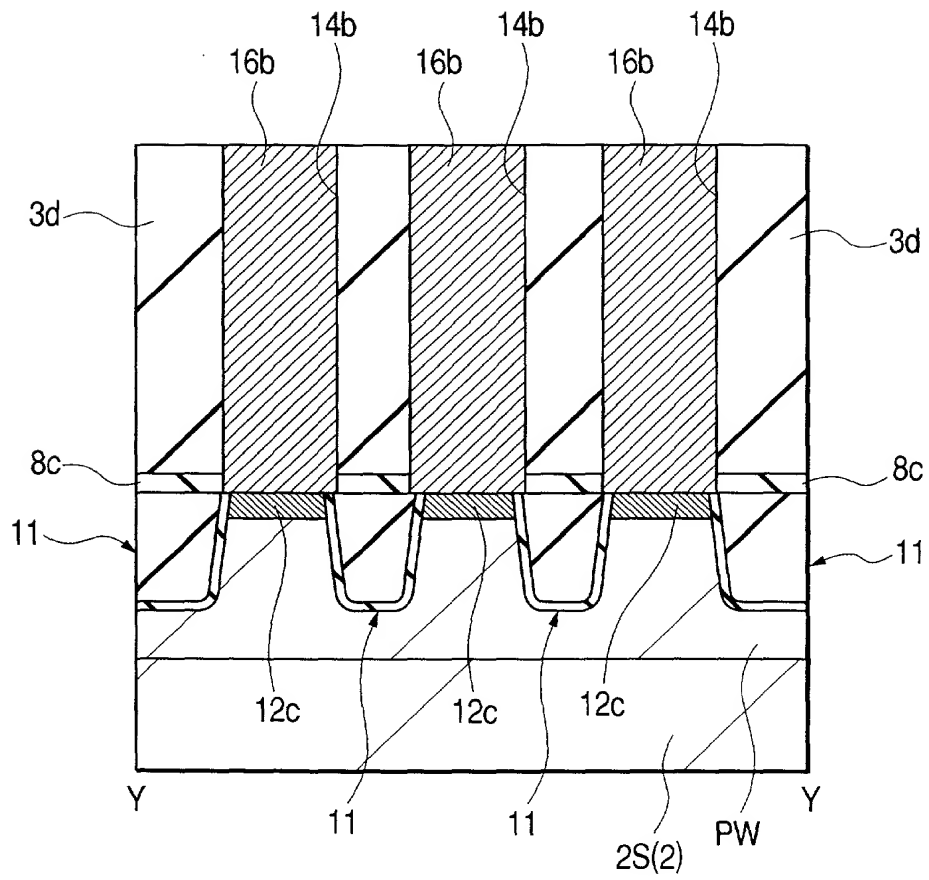


FIG. 31

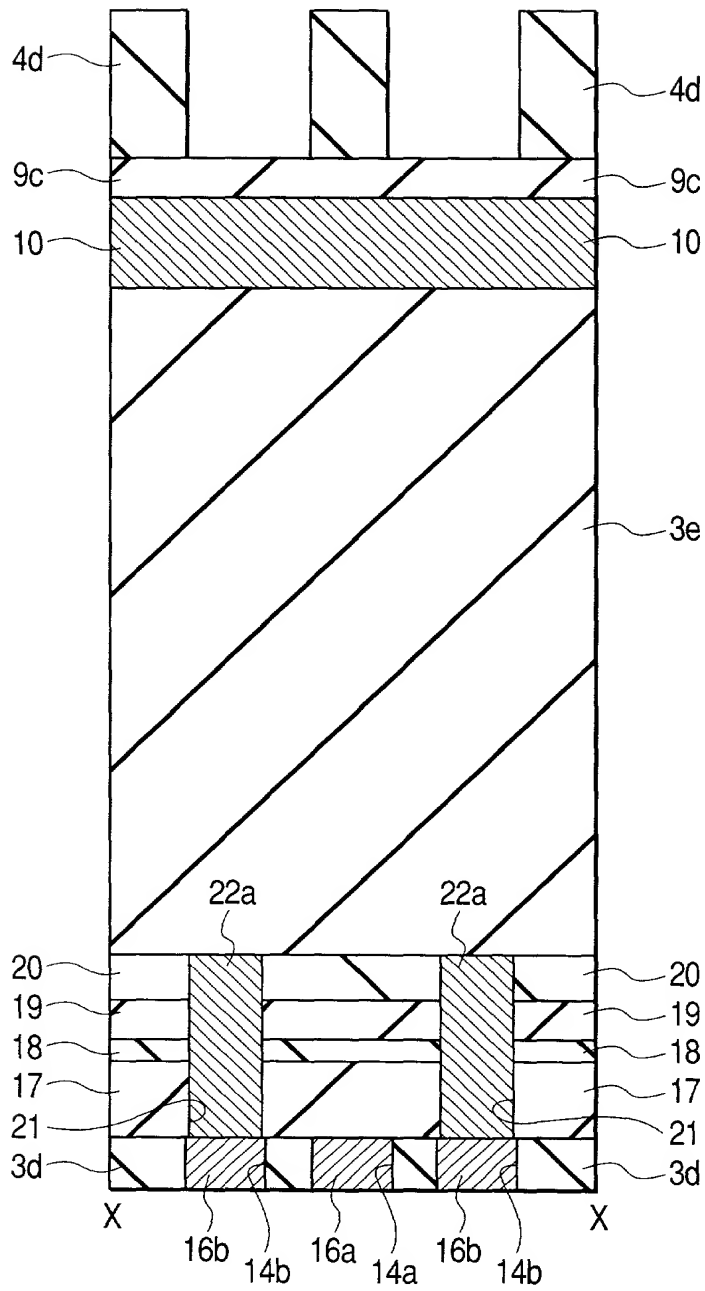


FIG. 32

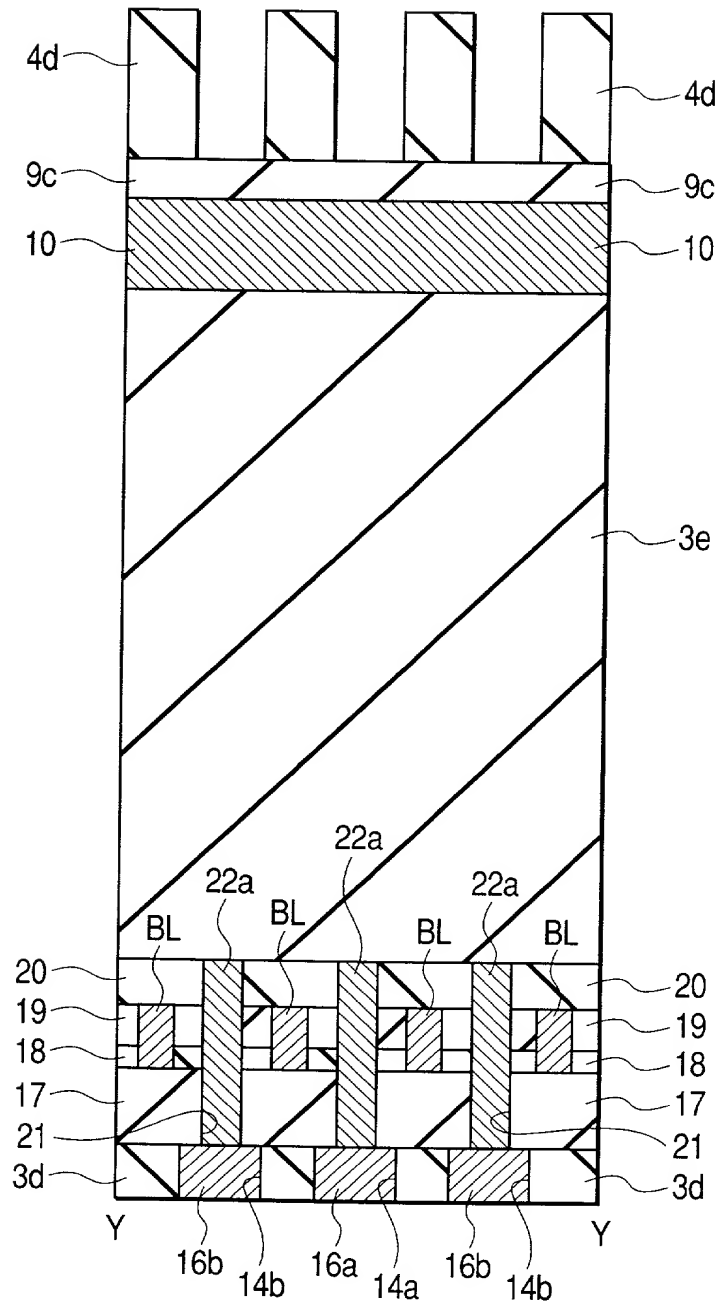


FIG. 33

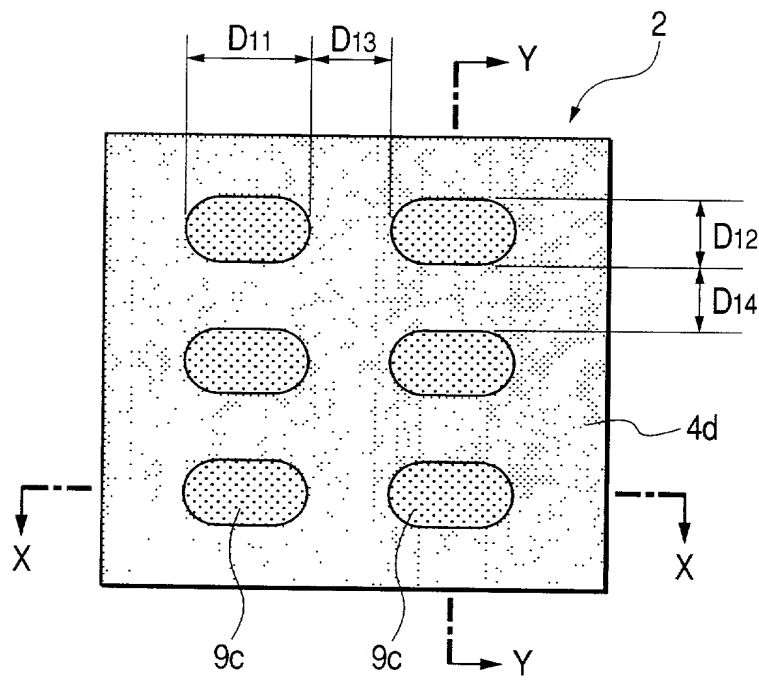


FIG. 34

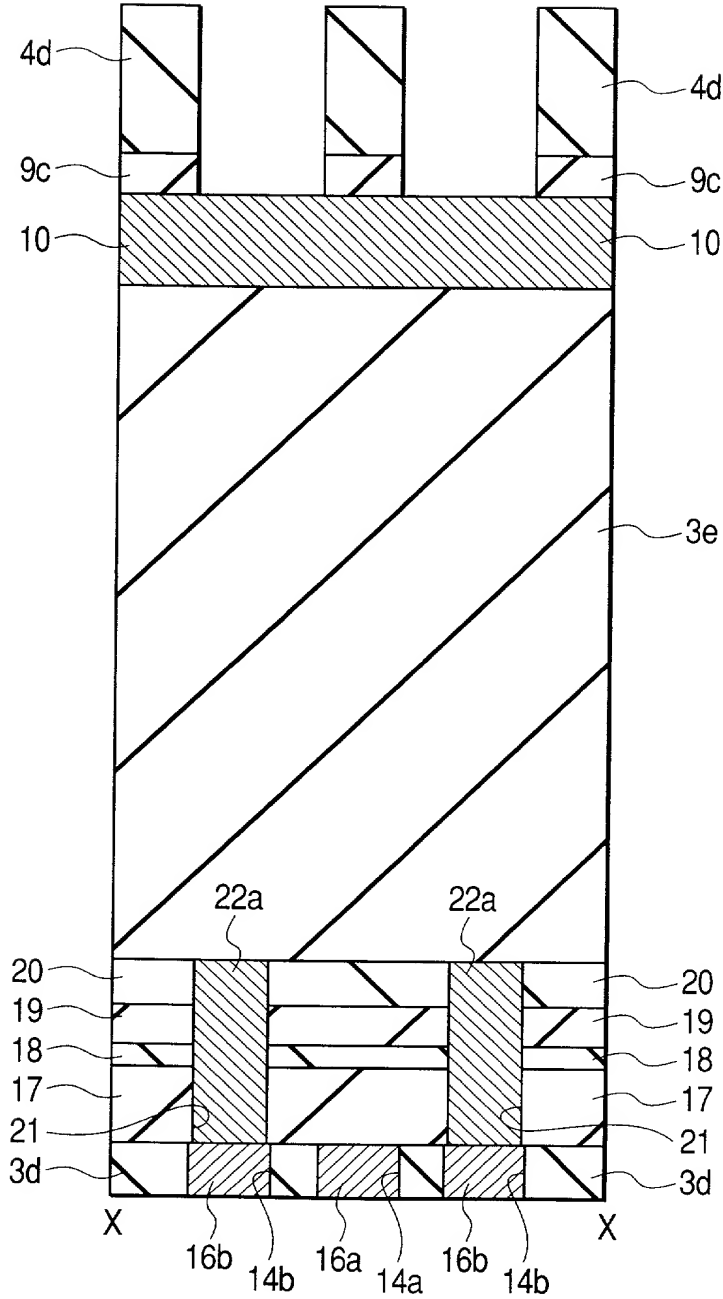


FIG. 35

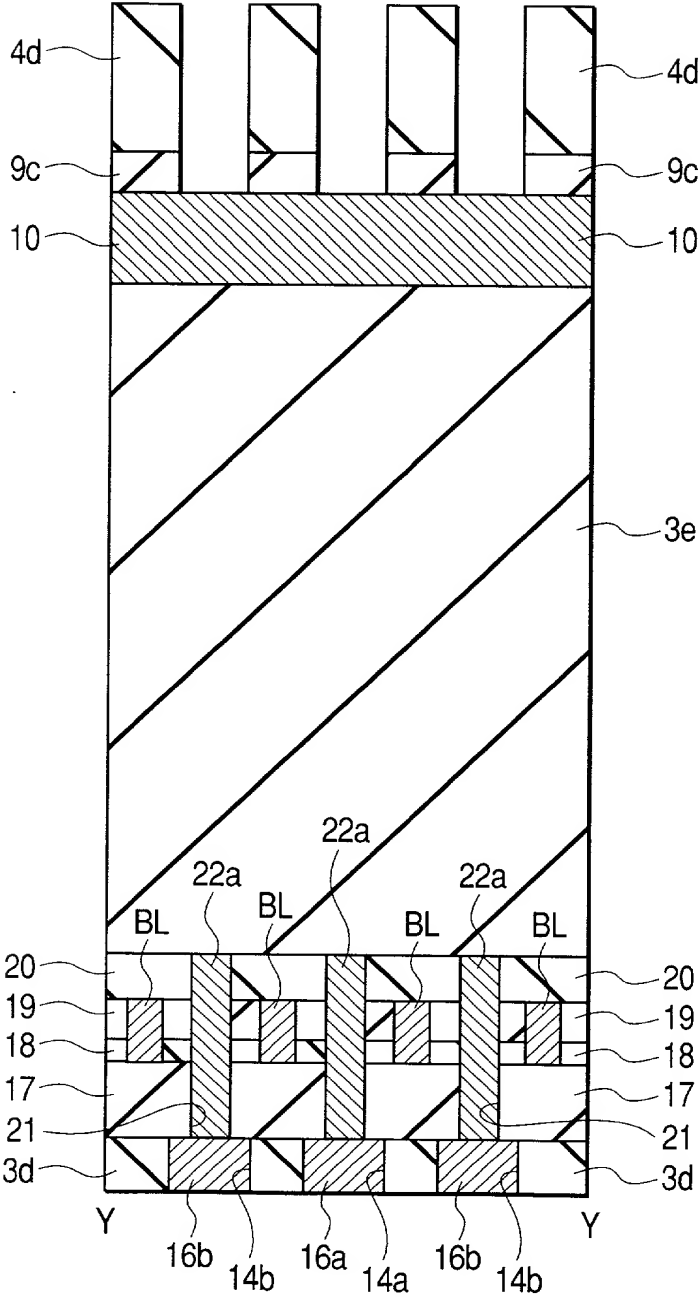




FIG. 36

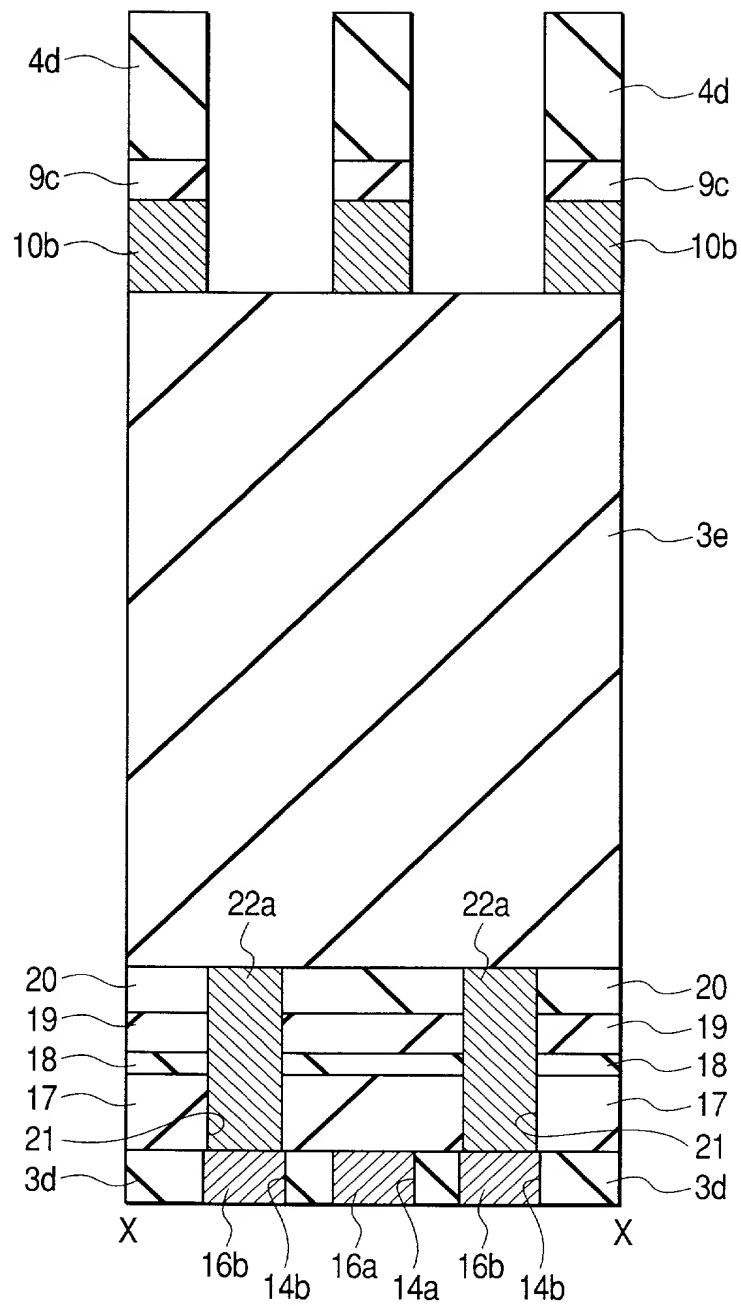


FIG. 37

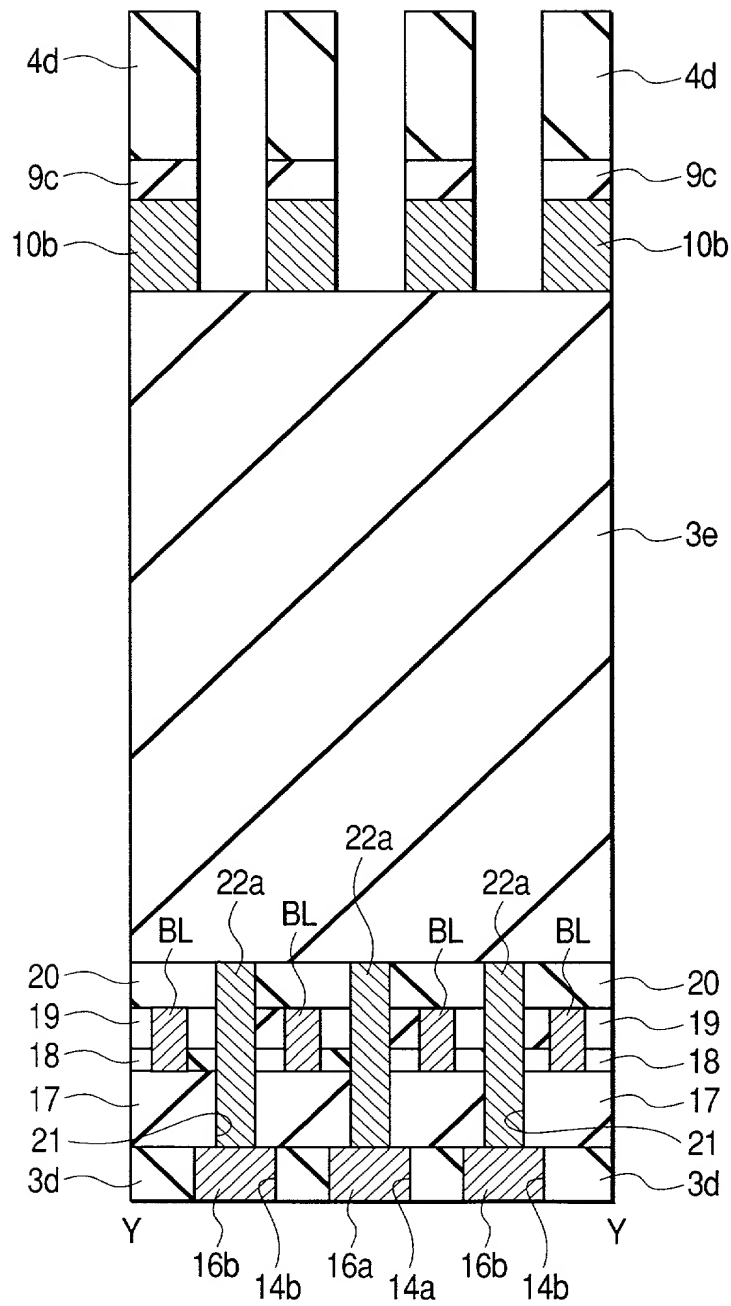
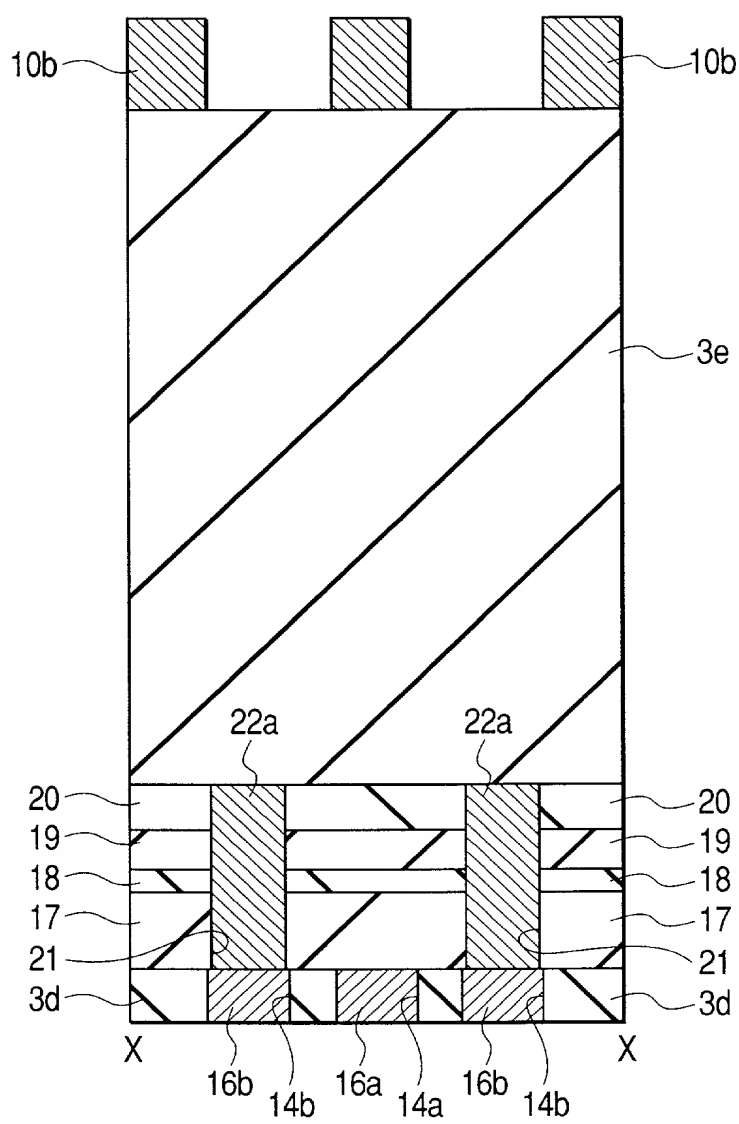
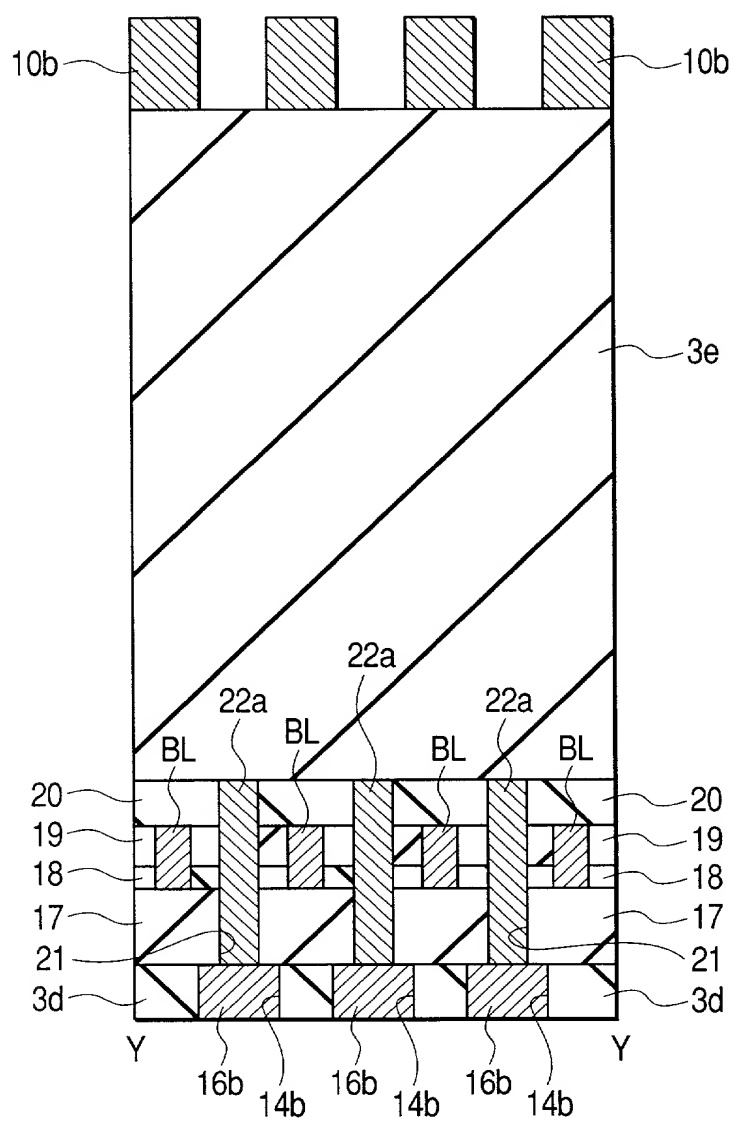


FIG. 38



*FIG. 39*

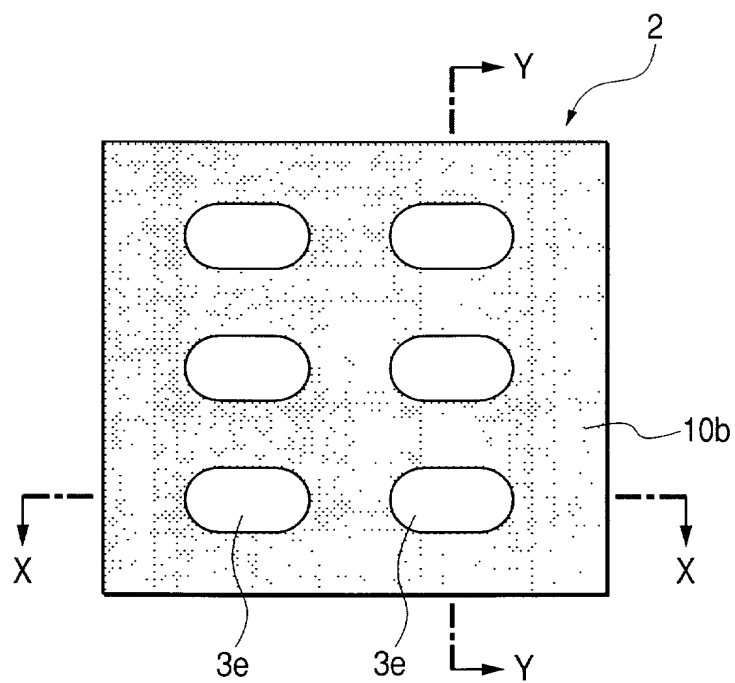
*FIG. 40*

FIG. 41

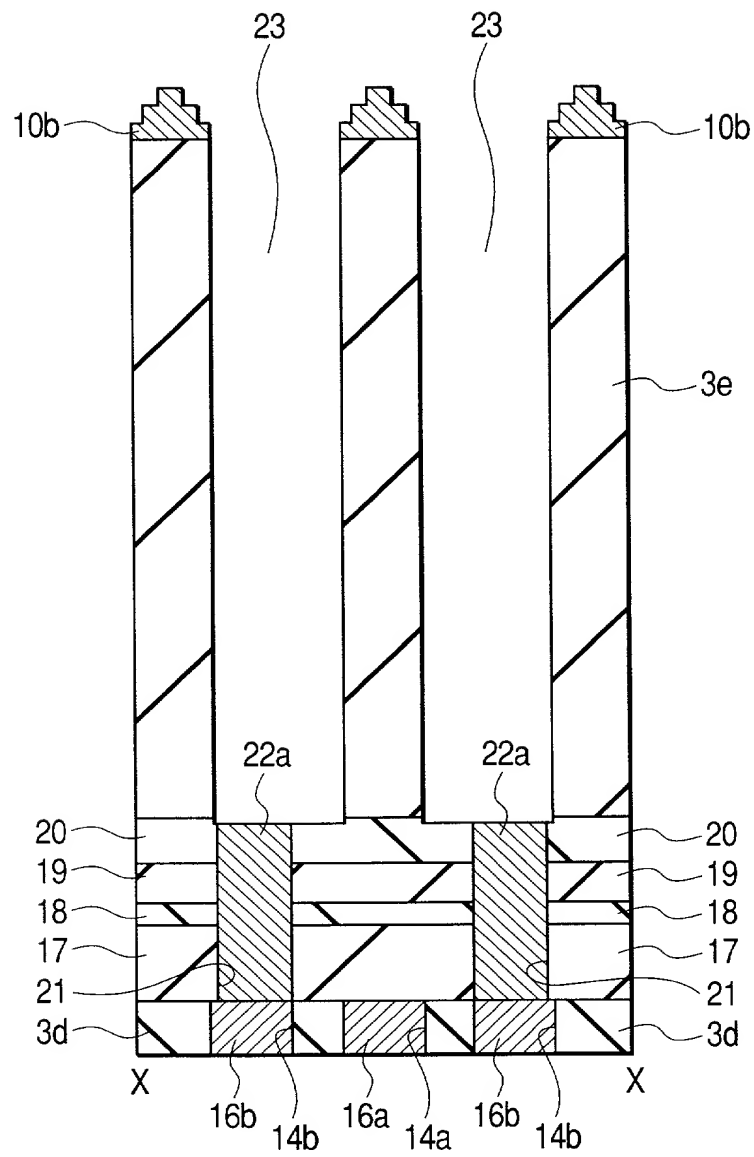


FIG. 42

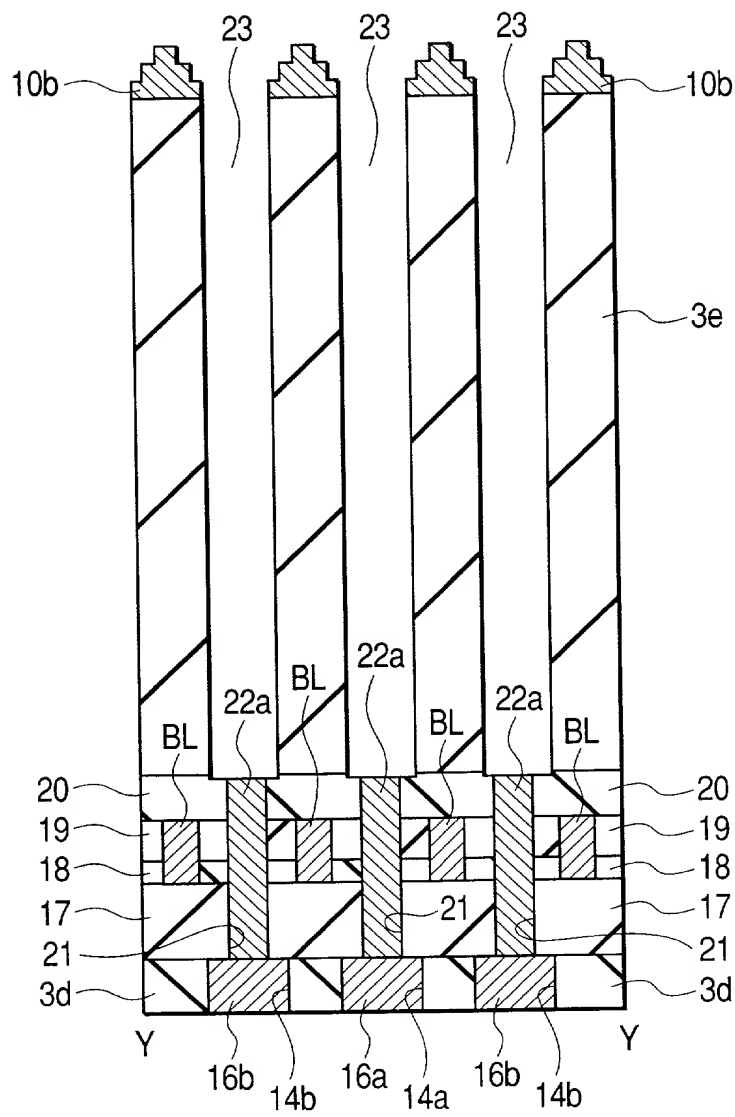


FIG. 43

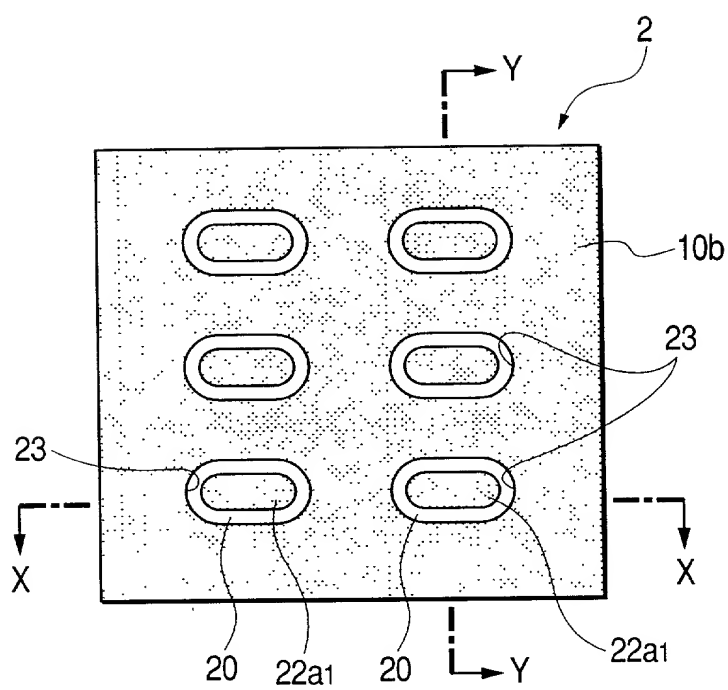
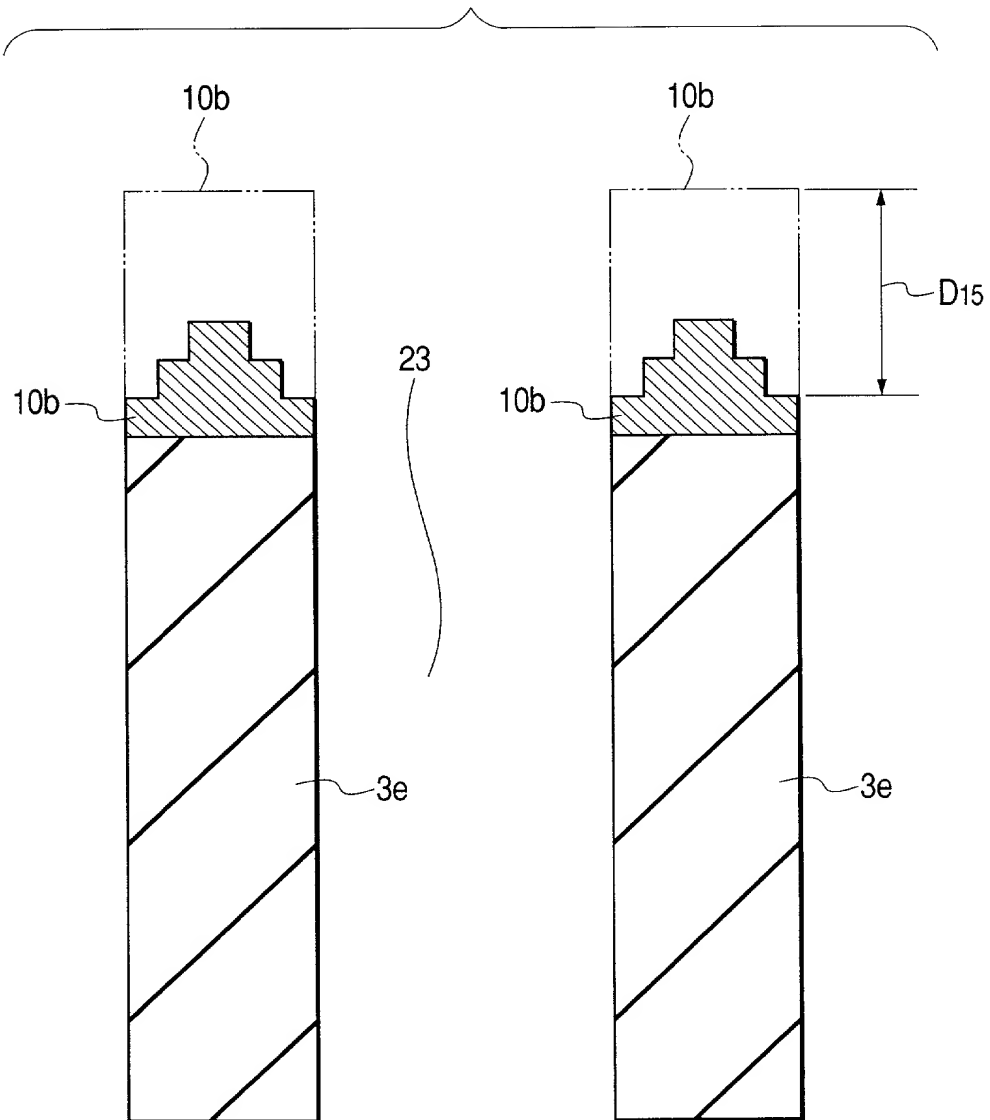




FIG. 44



**FIG. 45**

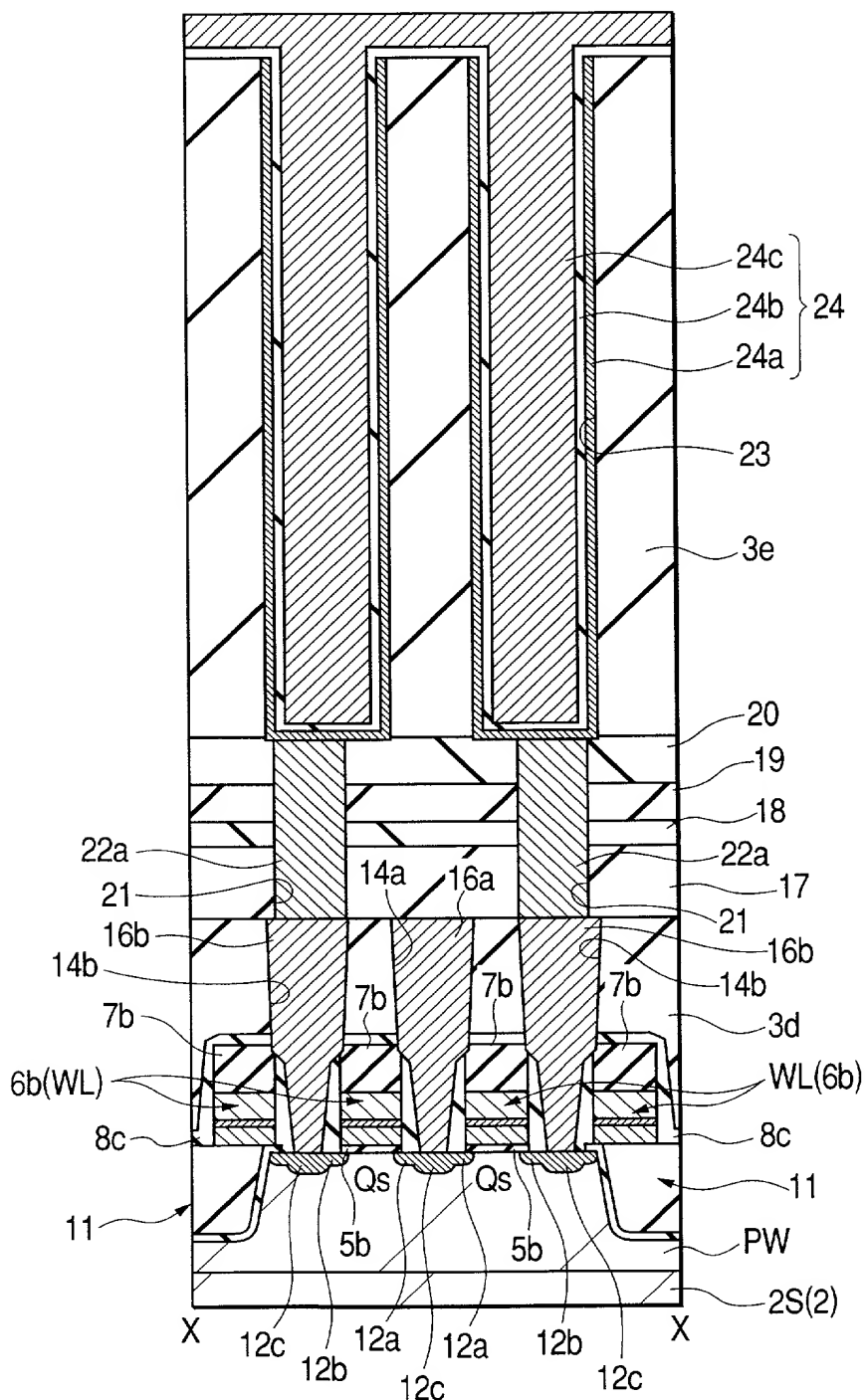
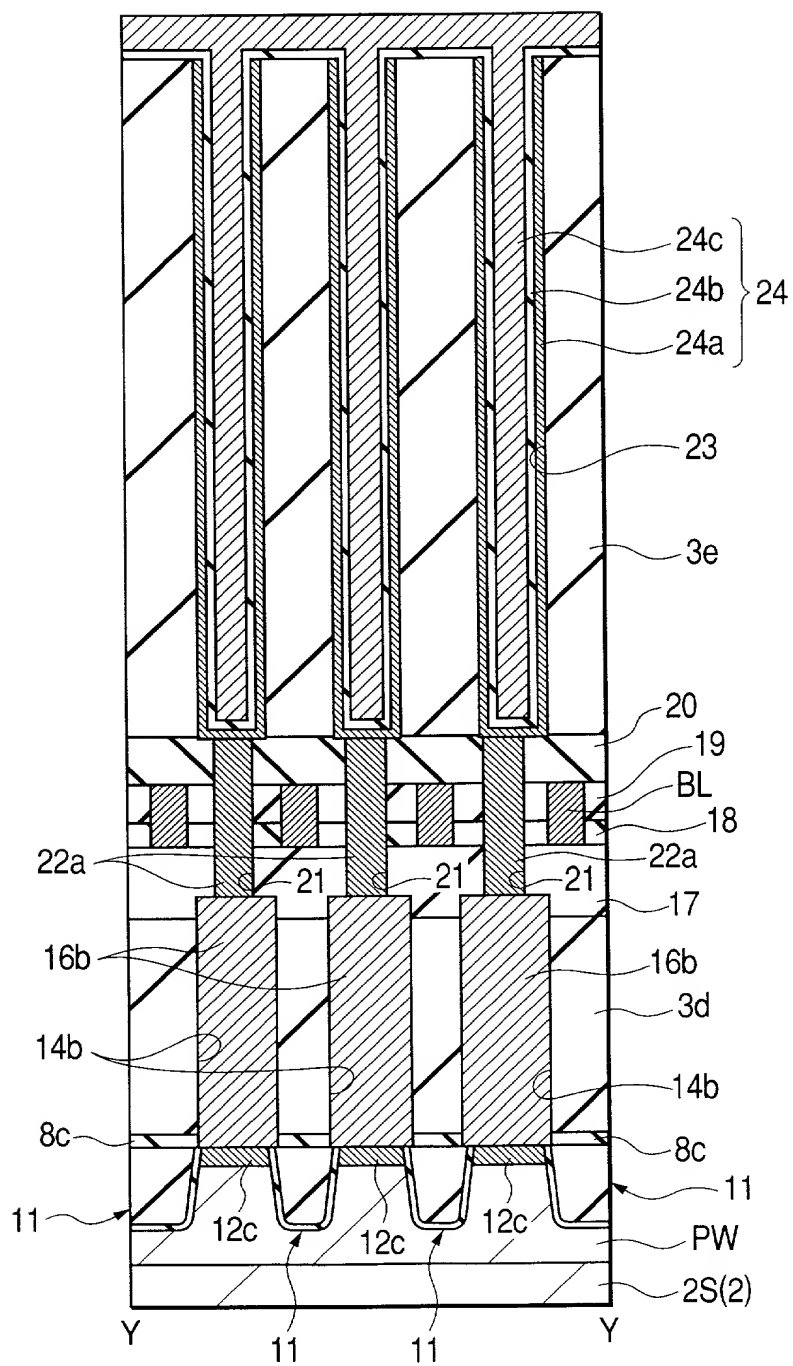
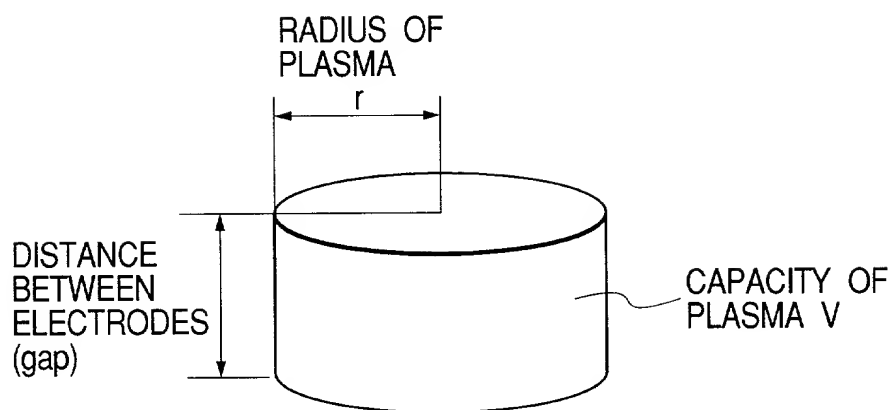


FIG. 46



**FIG. 47**



**FIG. 48**

